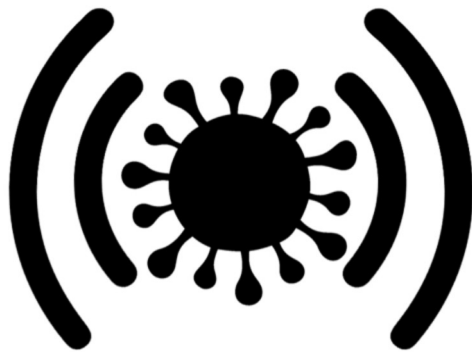


The DNA-related Pathogen Frequency Sets



Charlene Boehm

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Introduction

History of the DNA-related frequency method

The origins of the DNA-related frequency method are now more than 25 years old. During 1997-1999, Charlene Boehm explored the work of Royal Rife and other researchers who had investigated the use of frequencies or resonance in efforts to influence pathogens. After months of looking at various biophysical and harmonic relationships - especially in relation to pathogen DNA – a pattern was discovered that seemed to hold particular potential for further investigation.

Radio antennas transmit or absorb best in the presence of wavelengths that correspond in some way to their length. A DNA molecule can react in a similar way if an electromagnetic wavelength is matched to the physical length of the molecule. It is subsequently possible to compute a frequency which corresponds to that wavelength.

A paper detailing those biophysical and mathematical relationships was released by the author in August 1999. Soon thereafter, a U.S. patent application was submitted on the method. After a lengthy examination process, a patent was granted on October 9, 2007 (U.S. 7,280,874).

After the 1999 paper was written, it was discovered that the concept of DNA molecules exhibiting resonant characteristics was not an entirely new idea. The early 1980s saw considerable interest in this area of biophysics, as evidenced by several scientific papers from those years (1-4). While exact details regarding how electromagnetic frequency emissions might influence a DNA molecule are not yet fully understood, it is thought there may be an interaction of the emission's wavelength with the DNA strand or its immediate surrounding environment.

References

1. Van Zandt LL, Kohli M, Prohofsky EW. Absorption of Microwave Radiation by DNA double helix in aquo. *Biopolymers* 21(7):1465-1468 (Jul 1982).

2. Swicord ML, Edwards GS, Sagripanti GL, Davis CC. Chain-Length-Dependent Microwave Absorption of DNA. *Biopolymers* 22(12):2513-2516 (Dec 1983).
3. Edwards GS, Davis CC, Saffer JD, Swicord ML. Resonant Microwave Absorption of Selected DNA Molecules. *Physical Review Letters* 53(13):1284-1287 (Sep 1984).
4. Edwards GS, Davis CC, Saffer JD, Swicord ML. Microwave-Field-Driven Acoustic-Modes in DNA. *Biophysical Journal* 47:799-807 (Jun 1985).

Keep in mind

In nature, microorganisms are in a continual state of adaptation to, and with their surroundings. These adaptations are partly reflected in their DNA, which will change to a greater or lesser extent with time. Because the frequencies in this publication are based on the length of DNA molecules, they should be considered a “snapshot” at the time the DNA information was accessed.

Certain pathogens show a much higher propensity for DNA genome length variation than others. A few examples include the bacteria *Borrelia burgdorferi*, *Escherichia coli*, certain *Staphylococci* and *Streptococci*; and some viruses, including HIV and Hepatitis C virus.

When full genome lengths of any single organism are significantly or even wildly variant, it can subsequently produce hundreds of frequencies. I have in such instances abandoned the use of genome-related frequencies. Running such a large number of frequencies is time consuming and impractical.

Thus, automated data-mining of genome information from molecular biology databanks is not used in the preparation of these frequency sets. That type of effort can produce irrelevant data, and may have diminished practical returns for the end user.

Common names of pathogens as well as old genus/species names, alternate names, and synonyms are included in the listing to the best of my ability. Many of those names are also cross-referenced in the list.

Due to rapid advances in DNA sequencing technology in the past 20 years, many pathogens have been renamed (especially fungal organisms), and that will continue into the future.

Fungal organisms may have unfamiliar genus/species names; all fungi therefore include a “fungal organism” designation.

Parasitic organisms in many cases will have a common name included, if one is available.

Basic suggestions for use of the frequency sets

The frequency sets in any one section are listed in alphabetical order using the organisms' genus and species names.

All frequencies in this document are given in Hz (hertz), in the frequency range 700-1400 Hz.

The frequencies should be run in the order they are given in the set, reading the lines from left to right as if reading a book.

Sweeps of frequencies (especially wide ones) should not be used unless specifically suggested in the set, as it could constitute a waste of time and effort.

It is not in the scope of this document to suggest actual run times, due to variations in operation and output of frequency-emitting devices.

Running multiple DNA-related frequencies at the same time is discouraged. On some devices, running more than one frequency at a time may result in lower power output for any single number. It may also create mixing of signals within the body in a manner not helpful for the intended purpose.

In the instance of use during an acute infection event (for example, with respiratory viruses or some bacteria), it may be helpful to move through the entire set of numbers as efficiently as possible. One may want to initially decrease the usual amount of time spent on each number, and then once the complete set is finished run the entire set again in the same manner – or perhaps even a third time depending on the situation and the pathogen.

If one is unsure which frequency set to choose for a situation, try the following options depending on the situation: 1) try to find out the name of a prevalent circulating pathogen; 2) use a good search engine with search terms as specific as possible; 3) search my webpages “Diseases and Their Pathogens”. The links for those webpages are:

(human): <https://www.dnafrequencies.com/human-diseases>
(animal): <https://www.dnafrequencies.com/animal-diseases>

Finally, epidemiological research reveals increasing instances of zoonotic pathogen transmission in emerging diseases. Such transmission events occur between animals and humans, as well as between closely-related or unrelated animal species. While I have attempted to deal with this situation by inclusion of certain frequency sets in both the human and animal lists, obviously this is a developing phenomenon that will require more attention in the future. If you do not find a frequency set in the human list and you suspect zoonotic transmission, consider checking the animal list for any possibility.

Charlene Boehm
www.dnafrequencies.com
March, 2024

Human Pathogens

Absidia ramosa, see Lichtheimia hongkongensis

Acanthamoeba castellani

734.74	832.60	1279.26	895.18	958.90
870.58	863.41	1144.09	977.96	761.44
1020.29	714.78	794.60	757.87	909.57
1116.43	723.47	939.01	963.80	1116.43
1183.58	721.62			

Acetoanaerobium stricklandii

(also known as Clostridium stricklandii)

853.38	1219.29	749.34	739.55	1387.50
1388.35	775.80	803.63	844.41	794.60

Achromobacter xylosoxidans

1208.87	1219.29	1240.68	1262.84	1274.22
745.39	739.55	739.06	738.58	782.51
783.32	784.68	786.31		

Acinetobacter baumannii

726.72	742.46	741.97	745.88	740.51
778.20	778.74	783.05	780.08	779.81
1240.68	1251.66	1063.44	1055.51	1039.99
1010.27	794.60	790.16		

Acinetobacter junii

1240.68 736.66 783.05 787.96 796.83
781.43

Acinetobacter lwoffii

1331.41 1251.66 784.13 782.51

Acremonium chrysogenum

(Also known as Cephalosporium acremonium or Cephalosporium chrysogenum; fungal organism)

1327.96 960.73 742.94 709.41 749.34
1398.65 913.98 720.70 1048.66 1355.09
1369.86 779.81 1051.58 1085.90 734.74
1246.15 968.75 1159.33 1254.44 1026.77

Actinobacillus actinomycetemcomitans, see **Aggregatibacter actinomycetemcomitans**

Actinomyces bovis

1219.29 737.14 738.10 713.88 714.56
714.78 715.01 764.53 746.37

Actinomyces graevenitzi

1208.87 1219.29 742.46 741.48 724.63
725.56 758.38

Actinomyces israelii

900.63 1219.29 734.27 713.66 746.37
764.53

Actinomyces naeslundii

1219.29 1208.87 1168.91 781.97 780.35
749.34 747.85 747.36 713.21 714.78
713.88 712.53 768.68 883.99

Actinomyces viscosus

741.21 1208.87 724.86 710.74 723.47
764.53

Adenovirus type 4, human

1005.95 1006.90 1006.79 1098.55 1026.77
779.81 760.93 762.47 840.64 1263.90
1173.76 704.11 805.34 735.70 738.58
886.06

Adenovirus type 5, human

1007.60 1007.52 1007.71 1008.08 1302.08
773.94 846.93 1067.46 1073.53 759.40
760.93 838.77 1258.63 1319.54 1321.85
791.82 712.09 1296.85 921.42 1006.68
732.84 889.55 883.99

Adenovirus type 7, human

1027.47 1055.51 765.56 840.64 1263.90
949.25 1145.25 1384.95 807.06 728.59
1158.14 1111.50

Adenovirus type 11, human

1040.64 1041.27 1043.82 762.47 840.64
1263.90 1148.74 1343.03 795.15 796.83
727.19 1158.14

Adenovirus type 12, human

1061.04 949.25 1152.24 781.43 1303.58
833.21 700.62 916.94 1294.63 757.87
1084.86 820.23 912.50 807.06 1283.61

Adenovirus type 14, human

1041.54 878.50 1102.83 720.70 1190.43
1043.82 762.47 1350.24 840.64 975.43
1283.61 1350.24 797.68 899.45 727.19
928.22 892.35 1207.90 1158.14 1258.63
844.09

Adenovirus type 21, human

1022.40 1055.51 765.56 840.64 1263.90
1145.25 1343.03 794.32 728.59 1165.30
1111.50

Adenovirus type 36, human

1030.04 798.52 900.88 1324.95 1014.80
750.33 760.93 1032.39 1282.16 1285.43
899.45

Adenovirus type 37, human

1028.20 1028.26 1030.04 1032.39 760.93
840.64 1381.99 725.79 802.77 908.11
768.68 1031.45 743.43

Adenovirus type 40, human

1058.28 1058.41 831.99 755.34 710.74
844.41 1269.21 1166.50 990.81 1308.10
747.36 1015.71 1051.58 816.68 916.94
796.27 978.81 1085.90 1363.26 972.92
1377.36 1302.08 831.99

Adenovirus type 41, human

Sweep between the numbers 1058.75 - 1061.75 Hz in $\frac{1}{4}$ Hz steps (0.25 Hz apart, 13 numbers total); then run the following numbers exact:

817.56 749.34 705.43 844.41 1270.28
993.42 1301.33 1026.77 1081.74 814.91
878.50 794.60 970.00 1085.90 1363.26
972.92 1340.64 1302.08 1205.65 741.48

Aerococcus urinae

1229.90 734.74 780.35 777.13 756.35
785.77 783.59

Aeromonas caviae

1240.68 732.84 777.13 787.96 726.25
726.72 728.12 730.95 733.31 775.53
775.80 776.07 776.33 776.60 783.05

Aeromonas hydrophila

976.86 1087.98 1188.55 730.47 783.59
787.96 1006.04 788.69 1229.90 1187.77

Aeromonas veronii

1018.20 1188.55 1159.33 730.47 833.52

Aggregatibacter actinomycetemcomitans

(formerly known as Actinobacillus actinomycetemcomitans)

1100.47 803.63 762.47 974.17 1113.69
846.93 664.81 1010.27

Aggregatibacter aphrophilus

1229.90 733.79 733.31 776.33 729.06
772.89 775.00

Alcaligenes faecalis

1344.89 1373.18 1297.60 1262.84 801.35
785.77 729.06 727.19 777.13 700.19
721.62

Alternaria alternata
(Fungal organism)

713.25 722.62 723.15 1302.08 1388.35
1010.27 977.96 734.74 1292.41 1331.18
1168.91 710.74 1157.55 744.41

Anaerococcus prevotii
(Formerly known as Peptostreptococcus prevotii)

1230.61 1229.90 747.36 747.85 746.87
741.24 743.68 1359.98 801.35 852.04
982.21

Anaplasma phagocytophilum

787.52 721.62 790.16 812.57 975.44
989.08

Ancylostoma caninum
(Common name, dog hookworm)

1319.83 1176.20 816.38 717.50 814.03
739.55 1017.54 944.49 1297.60 1339.06
844.41 920.67 1214.06 718.42 1303.58

Ancylostoma duodenale & Necator americanus
(Two species of human hookworm)

1182.34 810.53 812.86 718.87 717.50
814.03 739.54 1017.54 947.66 944.49
1297.60 1339.06 844.41 920.67 1214.06
715.69 717.05 1303.58 1330.69 1319.44

Angiostrongylus general

(Includes the species *Angiostrongylus cantonensis* and *Angiostrongylus costaricensis*; respective common names, rat lungworm and American rat lungworm)

1341.34 1332.65 1178.65 1172.54 814.03
815.20 717.50 817.56 739.55 1020.29
1028.64 944.49 1293.15 1297.60 1334.32
844.41 920.67 1224.57 715.69 1331.18
1312.65

Anisakis simplex

(Common name, herring worm)

1300.95 1183.58 810.53 718.42 739.55
1030.51 944.49 1297.60 1339.06 844.41
920.67 1224.57 715.69 1303.58

Arthroderma obtusum

(Alternate or old names: *Microsporium gypseum* variant *nanum*; *Microsporium nanum*; *Nannizzia obtuse*; *Nannizzia nana*)

Arthroderma gypseum

(Alternate or old names: *Microsporium gypseum*; *Nannizzia gypsea*)
(Fungal organisms)

751.05 769.11 808.22 796.83 713.43
712.53 1398.65 948.45 960.53 737.62
1051.58 707.19 1333.53 700.19 773.41
1183.58 1154.01 936.68 930.51 935.13
968.75 740.51

Ascaris suum

(Also known as *Ascaris lumbricoides*; common name, pig roundworm)

1267.44 808.22 1179.88 717.96 810.53
737.62 1031.45 944.49 1297.60 1342.24
844.41 920.67 1214.06 714.33 1303.58

Aspergillus flavus
(Fungal organism)

1239.79	980.93	1161.71	929.75	1159.33
1326.50	743.43	1398.65	977.96	731.89
1069.47	1340.64	1390.05	771.83	1051.58
1138.33	870.39			

Aspergillus fumigatus
(Fungal organism)

1229.90	1139.88	1066.45	977.12	771.83
968.75	731.89	870.39	1398.65	918.43
1359.98	1293.15	1262.84	1390.05	743.43
1051.58	1141.78	1340.64		

Aspergillus lentulus
(Fungal organism)

1117.12	819.63	787.96	1017.54	743.43
1398.65	977.96	731.89	1066.45	1340.64
1390.05	771.83	1051.58	1136.62	963.80
968.75	1262.84			

Aspergillus nidulans
(Fungal organism)

1089.72	793.76	792.37	1299.09	743.43
1398.65	967.92	734.74	1069.47	1359.98
1379.88	771.83	1051.58	1143.51	842.71
1363.26	968.75	918.43	1206.29	1258.63
1262.84				

Aspergillus niger
(Fungal organism)

1164.14 799.08 933.58 1390.05 783.59
1337.48 1323.40 1329.62 743.43 1398.65
977.12 731.89 1078.65 1340.64 1390.05
771.83 1188.55 1051.58 1148.74 866.39

Aspergillus parasiticus
(Fungal organism)

1242.52 783.59 777.13 1312.65 743.43
1398.65 977.96 731.89 1069.47 1340.64
1390.05 771.83 1051.58 1138.33 870.39
968.75 1262.84

Astrovirus, human

731.42 737.14 725.79 820.23 819.34
818.45 814.03 813.15 807.93 806.20
977.54 968.75 962.57 958.90 957.68
949.25 945.68 944.49 943.31

Sweep from 1327.40 – 1337.10

ATCV-1 Virus
(Acanthocystis turfacea Chlorella virus 1)

1005.62

Atopobium vaginae

1240.68 1229.90 752.83 771.83 772.09
906.65 827.12 799.29 808.49 816.76
799.29

Avian erythroblastosis virus

768.89 918.43 928.99 939.01 975.44
977.96 1188.56 1201.49 1230.90 1247.52
1382.41 1387.50 1395.20 929.75 1068.97
1199.90 1246.15

Avian myelocytomatosis virus

1334.32 1343.43 861.44

Babesia bovis

1031.36 1031.37 753.71 824.71 1037.13
947.66 939.79 1285.80 1039.99 1055.51
873.07 1339.94 893.57 781.43

Babesia divergens

1235.69 781.43 827.12 895.18 1309.61
1311.13 1312.65 1354.28

Babesia duncani (strain WA-1)

1060.52 830.46 762.98 768.03 888.15
963.80 869.72 1037.13 873.07 1039.99
1071.50 1285.80 952.44 822.31

Babesia microti

1208.87 1282.16 833.06 835.37 768.16
824.11 1263.50 814.84 858.26 958.90
890.95 768.68 783.05 796.27 866.39
850.75 1012.08 1004.00 993.42

Bacillus anthracis

The following most important numbers should be run exact, and can be run more than once as necessary:

931.66 986.49 942.13 797.20 797.30
1229.90 1198.63 1309.61 751.33 749.84
750.33 778.47 777.67 793.76

The following numbers can be run plus and minus 2 hertz:

840.86 844.41 856.08 859.46 862.75
875.80 886.50

Please note: In the instance of infection with this dangerous pathogen, this frequency information should not be used as a replacement for appropriate medical care.

Bacillus cereus

1229.90 1198.63 750.83 750.33 726.72
724.86 727.66 778.47 778.20 777.93
773.94 801.35 716.14 1386.65

Bacillus licheniformis

1229.90 1240.68 727.19 728.12 728.59
729.53 730.00 730.47 730.95 731.42
735.70 736.18 771.30 771.57 771.83
772.09 772.89 773.15 721.62 796.83
803.63 732.84

Bacillus oleronius, see **Heyndrickxia oleronia**

Bacteroides buccalis, see **Prevotella buccalis**

Bacteroides caccae

1285.80 740.03 740.51 741.00 785.22
785.49 785.77 786.04 786.31 714.33
712.53 779.27

Bacteroides distasonis

(Also known as **Parabacteroides distasonis**)

707.19 1373.18 942.92 930.51 757.37
756.35 819.63 819.34 817.27 710.74
799.08

Bacteroides fragilis

890.40 878.23 823.81 990.38 1073.92
1262.84 1309.61 942.92 738.58 736.66
786.31 786.59 800.78 801.07

Bacteroides ovatus

1347.03 734.74 717.96 710.74 741.97
742.46 743.92 788.50 786.04 738.58
739.06 740.51 783.32 783.59 785.77

Bacteroides vulgatus

1285.80 1262.84 942.92 924.43 749.84
837.22 809.08 808.22 800.22 716.14
766.60

Barmah Forest Virus

787.96 1053.73 881.35 1178.71 1035.90
873.43 773.05 932.27 855.59 1142.11
1019.64 1100.12

Bartonella bacilliformis

801.83 1198.63 769.21 802.77 927.46

Bartonella birtlesii

1240.68 756.86 802.20 721.62 883.99
794.60

Bartonella bovis

1229.90 760.93 805.05 725.32 883.99
796.83

Bartonella clarridgeiae

760.90 1251.66 767.12 805.05 703.67
707.19

Bartonella elizabethae

1179.92 1202.23 1240.68 1251.67 766.08
825.92 805.05 805.63 725.32 794.60
883.99

Bartonella grahamii

758.38 802.20 1188.55 841.89 989.75

Bartonella henselae

1251.66 1240.68 758.89 766.60 767.12
804.48 805.63 878.50 796.83 727.19
756.35

Bartonella koehlerae

1331.61 1251.66 767.12 804.48

Bartonella quintana

732.69 1198.63 758.38 802.49 723.47

Bartonella rochalimae

768.99 1251.66 767.64 805.91

Bartonella taylorii

1189.40 1194.94 1240.68 759.91 804.48
725.32 883.99 794.60

Bartonella tribocorum

884.79 775.57 1198.63 757.87 877.48
862.43

Bartonella vinsonii

1240.68 1251.66 760.93 767.12 786.86
819.93 804.48 805.05 799.08 723.47
883.99 1285.47 1296.09 1145.88 1285.61
1321.95

Bartonella washoensis

1210.28 1212.92 1251.66 766.08 806.20

Baylisascaris procyonis

(Common name, raccoon roundworm)

1224.82 1174.98 809.37 717.50 810.53
737.62 1023.06 944.49 1297.60 1342.24
844.41 920.67 1214.06 714.33 1303.58

Bilophila wadsworthia

1240.68 729.53 735.70 772.89 773.41
781.43 748.35 801.35

BK virus

879.52 879.69 880.21 880.38 881.06
881.58 882.44 707.19 740.51 1072.52
810.53 1039.99 1084.34 1087.46 1092.19

Blastocystis species subtypes 1-4

Subtype 1

1275.74 1275.61 860.13 744.90 1144.09
764.01 787.96 773.41 936.68 1143.51
968.75 963.80 958.09 958.90 1089.03

Subtype 2

1279.21 858.83 745.39 1144.09 764.01
787.96 773.41 936.68 1143.51 963.80
958.09 958.90 1087.46

Subtype 3

1280.84 1282.07 1144.09 762.47 787.96
773.41 936.68 1133.20 954.05 958.09
958.90 1100.15

Subtype 4

1306.26 1306.35 854.29 852.68 721.62
1140.63 762.47 787.96 773.41 936.68
952.44 1141.78 878.50 935.12 958.09
958.90 1093.77

Note: These are the more common subtypes that infect humans, with subtypes 1-3 being the most common. The former name of the organism was “Blastocystis hominis”, which has now been officially retired due to cross-species zoonotic passage between animals and humans.

Blastomyces dermatitidis

(Fungal organism)

711.50 1188.55 1309.61 924.43 762.08
762.47 1107.69 1388.35 824.71 734.74
968.75 1043.82 1374.85 1350.24 925.94
1051.58 781.43 1011.63 930.51

Bordetella pertussis and Bordetella parapertussis

1134.22 970.90 1240.68 739.06 785.49
732.84 1369.86 780.35 1030.05 1398.65
831.99 1235.27 781.43 828.33

Borna Disease Virus

1015.94 1016.05 1016.17 1017.54 1075.58
935.13 1321.85 748.84 937.84 881.41

Borrelia afzelii

(Also known as *Borrelia afzelii* [synonym]; this *Borrelia* species is associated with lyme type of disease).

882.61 1274.22 1285.80 1297.60 1321.85
1178.65 734.27 736.66 739.55 742.94
743.92 746.87 771.57 773.41 773.94
1279.62 1279.73 1282.26

Borrelia bavariensis

(Previously known as *Borrelia garinii* subspecies *bavariensis*; also known as *Borrelia bavariensis* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1281.36 1279.13 1277.54 1284.06 1285.80
1023.99 1027.71 737.14 772.89 801.35
781.43 1010.27 1021.21 1073.53 1390.05

Borrelia bissetti

(Also known as *Borrelia bissetti* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1321.85 743.92 773.68 773.94 1286.32

Borrelia burgdorferi

(Also known as *Borrelia burgdorferi* [synonym]; this *Borrelia* species is associated with lyme type of disease).

Primary numbers:

736.18 736.66 739.06 771.57 775.53
1274.22 1285.80 1297.60 1055.51 1124.76

Secondary numbers:

783.59 819.93 714.33 985.63 1365.80
713.43 737.14 737.62 932.05 838.77
1374.85 831.38 895.18 890.95

All numbers should be run exact.

Borrelia californiensis

(Also known as *Borrelia californiensis* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1285.80 737.14 783.59 805.91

Borrelia coriaceae

(This *Borrelia* species is associated with relapsing fever).

1269.30 1285.80 733.31 769.73 768.68
810.53

Borrelia duttonii

(This *Borrelia* species is associated with relapsing fever).

Primary numbers:

1243.63 1262.84 735.70 768.95 779.27

Secondary numbers:

806.35 1203.01 883.75 776.90 785.90
1345.18 1317.81 1277.50 1167.21 1143.55
1026.13 1010.53 897.28 877.58 858.97
1090.49

Borrelia garinii

(Also known as *Borrelia garinii* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1073.53 1390.05 781.43 1274.22 1285.80
1297.60 736.18 742.94 736.66 828.33
771.57 773.41 1279.53 1281.36 1283.42

Borrelia hermsii

(This *Borrelia* species is associated with relapsing fever).

1285.80 736.66 733.31 771.04 769.47
769.73 779.27 812.86 817.56 1243.32
1256.02 1256.26 1256.30 1256.36

Borrelia hispanica

(This *Borrelia* species is associated with relapsing fever).

1299.27 1285.80 733.31 768.42 771.30
810.53 815.20 787.96

Borrelia mayonii

(Also known as *Borrelia mayonii* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1281.16 1285.80 733.79 771.83 771.30
803.63 783.59

Borrelia miyamotoi

(This *Borrelia* species is associated with relapsing fever).

1285.80 732.84 733.31 733.79 734.74
1238.65 769.73 770.25 771.30 815.20
819.93 783.59 1277.05 1280.46

Borrelia parkeri

(This *Borrelia* species is associated with relapsing fever).

1262.60 1263.61 1285.80 1238.65 733.31
769.99 769.73 817.56

Borrelia persica

(This *Borrelia* species is associated with relapsing fever).

1298.24 1285.80 799.08 772.09 824.71
783.59

Borrelia recurrentis

(This *Borrelia* species is associated with relapsing fever).

1244.56 1262.84 735.70 768.95 779.27
1168.60 789.02 1090.18 1025.29 982.08
1372.25 738.22

Borrelia spielmanii

(Also known as *Borreliella spielmanii* [synonym]; this *Borrelia* species is associated with lyme type of disease).

1285.80 736.66 803.63 772.09 985.63
707.19 783.59

Borrelia turicatae

(This *Borrelia* species is associated with relapsing fever).

1285.80 736.66 771.30 775.00 812.86
1251.41 1251.86 1251.87 1251.97 1263.08

Borrelia valaisiana

(Also known as *Borrelia valaisiana* [synonym]; this *Borrelia* species is associated with Lyme type of disease).

1285.80 747.85 771.57 783.59 714.33
985.63

Borrelia vincentii, see *Treponema vincentii*

Bovine leukemia virus

731.42 1217.98 1203.73 1138.33 958.09
960.53 1064.69 1318.00 939.79 884.68
1038.08 1038.79 1054.40 1054.03

Brachyspira pilosicoli

1229.90 1219.29 739.06 1379.88 1390.48
751.08 757.87 801.97 837.95 895.95
906.78

Brucella abortus

996.95 1001.48 1090.89 1092.38 1188.56
1198.63 778.20 778.74 778.47 805.63
805.92 1347.03 862.43 783.59

Brucella canis

1100.36 960.11 1198.63 762.47 949.25
861.77 824.11 1347.03 664.03 1331.18

Brucella melitensis

1092.38 1094.55 983.76 1001.48 1188.56
1198.63 778.20 778.74 790.71 775.80
776.33 778.47 805.06 805.63 1347.03
862.43 783.59

Brucella suis

1099.41 1204.58 959.65 827.12 1131.50
1198.63 759.40 778.74 762.47 778.45
805.92 861.77 949.25 824.11 1347.03
906.65 1328.06 968.75 1331.18 889.55

Brugia malayi
(Filarial roundworm)

1325.63 1158.14 843.15 1374.85 810.53
726.25 1041.90 973.76 1291.67 1342.24
836.91 920.67 1183.58 709.41 1251.66

Brugia timori
(Filarial roundworm)

1325.53 1159.33 836.91 1369.86 807.06
726.25 1041.90 973.76 1300.58 1351.86
829.55 922.92 1183.58 707.63 1138.33

Burkholderia cepacia & cenocepacia

(*Burkholderia cenocepacia* is formerly named *Burkholderia cepacia* genomovar III).

1262.84 1274.22 1240.68 1071.50 741.97
741.48 739.06 766.08 785.77 785.49
786.86 786.59 817.56 766.60 768.68
765.05 1386.65 781.43 933.58 982.21

Burkholderia mallei

(Formerly known as *Pseudomonas mallei*).

1285.80 1262.84 1251.66 1229.90 744.41
744.90 745.39 745.88 746.37 746.87
750.83 740.51 741.00 707.63 782.24
782.78 785.49 786.31 786.59 786.86
787.13 1376.53 766.60 781.43

Burkholderia multivorans

1262.84 1373.18 803.63 741.97 737.62
738.58 738.10 739.06 785.77 785.49
786.04 786.59 786.86 791.54 899.80
899.45 817.56 768.68

Burkholderia pseudomallei

(Formerly known as *Pseudomonas pseudomallei*).

1251.66 739.55 739.06 738.58 737.62
783.32 783.05 782.51 782.24 781.43
1376.53 766.60

Campylobacter fetus

1198.63 1208.87 1219.29 744.90 745.39
753.33 743.43 767.12 772.62 777.13
778.74 747.36 862.43 859.81 785.77

Campylobacter gracilis

1219.29 746.87 746.37 1319.15 1276.73
895.18 783.59

Campylobacter jejuni

1188.55 748.35 749.34 790.16 903.76
766.08 810.24 809.66 809.95 783.32
777.40 739.06 1323.40 953.25 780.89
865.06 707.19 721.62 892.35 1359.98

Campylobacter pylori, see Helicobacter pylori

Campylobacter rectus

(Alternate name, Wolinella recta)

1188.55 749.34 1297.22 870.39 792.37
901.05 901.09

Campylobacter showae

1198.63 1188.55 776.60 747.85 748.84
783.59 776.87 784.95 777.67 792.37
870.39

Campylobacter upsaliensis

786.86 770.78 709.85 707.19 994.29
1219.29 1240.68 747.85 754.34 733.08
733.55 889.55 790.16 787.96

Candida albicans

(Fungal organism)

906.65 900.88 924.43 1386.65 1178.65
1266.37 1347.03 949.25 895.80 723.01
774.47 735.34 717.96 1398.65 764.53
1187.31 792.93 727.19 811.70 1113.69
1364.90 1285.80 1229.90 968.75 972.92

It may be beneficial to run the set in a loop (more than once).

Candida auris

(Fungal organism)

1337.52 864.73 1290.20 1369.86 773.94
1398.65 980.51 710.74 749.34 764.53
1191.06 806.49 732.84 825.92 1113.69
1331.18 1285.80 1229.90 968.75 738.58
968.75 1315.70 1258.63

Candida famata, see Debaromyces hansenii

Candida glabrata

(Fungal organism)

1372.35 731.89 1246.15 902.36 1194.02
1153.81 1036.73 888.95 842.66 1249.77
1167.76 1103.11 1063.58 971.62 889.91
804.30 827.09

Candida guilliermondi, see *Meyerozyma guilliermondi*

Candida krusei

(Also known as *Pichia kudriavzevii*. Fungal organism)

705.26	813.15	738.10	1390.05	764.53
1398.65	977.96	717.96	1066.45	1387.50
794.60	781.43	1127.00	1168.31	1111.50
968.75	1229.90	1190.43		

Candida lusitaniae, see *Clavispora lusitaniae*.

Candida parapsilosis

(Fungal organism)

844.72	854.61	709.41	807.93	712.53
1398.65	980.51	764.53	1210.16	797.96
716.14	816.97	1113.69	1357.53	1211.46
761.44	1009.37	1103.37	1229.90	1014.80
968.75				

Candida sake

(Fungal organism)

1381.73	842.52	785.77	708.08	1065.45
764.53	1398.65	970.42	968.75	1229.90
1206.29	827.73	732.84	1113.69	1362.44
1285.80				

Candida tropicalis
(Fungal organism)

1326.06 875.10 1358.35 709.41 1398.65
970.42 764.53 1206.29 829.55 738.58
815.20 1113.69 1343.03 1285.80 1229.90
968.75

Capnocytophaga ochracea

1297.60 750.33 801.35 886.87

Chickenpox virus, see Human herpesvirus 3

Chikungunya Virus

761.89 764.53 765.43 766.21 766.73
766.80 767.12 767.71 768.16 768.49
769.27 770.39 771.04 771.77 783.18
1208.23 1219.29

Chlamydia muridarum

1079.88 1206.78 1229.90 1240.68 942.92
729.53 730.95 731.42 769.73 769.99
1350.24 839.39

Chlamydia trachomatis

1109.34 1111.40 1115.34 1205.33 1206.78
1207.10 1198.63 1219.29 730.47 769.99
788.78 789.33 790.43 1350.24 903.75

Chlamydophila caviae

987.45 1136.33 1198.63 730.95 769.21
767.38 1337.48 854.61

Chlamydophila pecorum

1240.68 729.06 769.21 770.52 1321.85
1331.18 1393.48 1047.11 1047.23 1047.26
1047.43 1047.47 1048.99

Chlamydophila (Chlamydia) pneumoniae

1240.68 725.32 769.21 708.96 1331.18
1350.24 1219.29 729.53 790.43 941.82
942.09 943.09 943.13 943.44 944.64
945.12 933.64

Chlamydophila psittaci

988.45 988.46 988.59 988.90 990.84
995.35 1198.47 1251.66 1274.22 1240.68
735.22 736.18 770.78 771.30 1343.83

Citrobacter amalonaticus

878.91 1229.90 734.74 773.41 752.33

Citrobacter braakii

1229.90 729.53 730.00 730.47 771.57
772.89 773.15 773.41 773.68 779.27
752.33

Citrobacter freundii

779.27 752.33 772.89 1229.90 1240.68
1219.29 1251.66 1274.22 740.03 740.51
741.00 735.70 734.74 779.81 779.28
779.00 773.94 773.68 772.09

Citrobacter koseri

981.82 973.97 808.07 1229.90 896.60
778.74 729.06 783.59 772.89 936.68

Cladosporium anthropilum

(Fungal organism)

1007.54 1240.00 1376.53 710.74 752.33
1398.65 972.92 731.89 1051.58 1331.18
768.68 765.56 1051.58 1154.01 850.75
968.75 1262.84

Cladosporium cladosporioides

(Fungal organism)

984.77 1239.66 1374.02 716.14 752.33
1398.65 972.92 731.89 1051.58 1331.18
768.68 765.56 1154.01 850.75 968.75
1010.27

Cladosporium sphaerospermum

(Fungal organism)

1014.06 1232.58 724.86 710.74 752.33
1398.65 975.43 731.89 1051.58 1324.17
781.43 764.01 1051.58 1141.78 854.61
968.75 1262.84

Clavispora lusitaniae

(Also known as *Candida lusitaniae*. Fungal organism)

727.19 779.54 1164.10 706.75 1297.60
777.13 780.35 1398.65 983.06 764.53
1206.29 806.49 738.58 796.27 1113.69
1364.90 1285.80 968.75 1229.90

Clonorchis sinensis

(Common name, Chinese liver fluke)

1304.70 1134.91 727.19 1254.44 1297.60
794.60 886.06 705.43 1227.23 1075.57
725.79 958.90 881.23 1017.54 1098.55

Clostridium bolteae

1208.87 1219.29 733.31 732.37 743.92
780.35 781.70 780.08 783.32 803.63
792.37

Clostridium botulinum

The following frequencies should be run exact:

1219.29 753.83 752.33 751.33 780.34
780.08 779.81 779.27 777.93 777.67
1131.50 742.94 1167.10 1168.00

The following frequencies can be swept plus and minus 3 hertz:

1160.72 1170.89 1192.37 1199.61 1219.54
1232.43

Clostridium difficile

1219.29 1229.90 1321.85 1395.20 1394.34
1393.48 1389.20 1388.35 1387.50 1287.26
1272.78 739.55 767.12 766.86 766.60
766.34 860.46 872.06 810.53 996.04
1386.65

Clostridium histolyticum, see Hathewayia histolyticum

Clostridium perfringens

The following frequencies should be run exact:

1251.66 1240.68 1229.90 1208.87 1198.63
751.83 751.33 750.83 746.38 745.88
743.92 784.68 779.54 779.27 779.00
778.74 778.47 785.77 986.73 1027.47
962.11 730.18 741.61 1333.39

The following numbers can be run plus and minus 3 hertz:

764.43 711.56 799.79

Clostridium ramosum

1321.85 747.36 741.48 776.87 777.13

Clostridium scindens

1208.87 1198.63 733.79 781.16 781.43
781.70 779.27 808.22

Clostridium sporogenes

1219.29 1229.90 745.88 754.84 778.74
779.27 780.62 794.60 852.04 756.35
736.66

If time permits, sweep between 1071-1173 Hz.

Clostridium tetani

1146.70 1055.51 760.68 795.71 795.43
827.84 977.51 812.86 831.99 750.33

Coccidioides

(Includes the species *Coccidioides immitis* and *Coccidioides posadasii*)

1229.90 1240.68 1188.55 906.65 1259.33
1258.63 1260.73 1257.23 719.79 719.56
1305.83 1306.59 1363.26 968.75 756.35
900.52 892.35 1147.57 1004.00

Colorado Tick Fever Virus

1040.46 1157.85 1262.14 716.82 930.51
1056.99 1060.95 1115.33 1201.17 1203.73
1133.77 838.15

Comamonas kerstersii

1306.30 1262.84 735.70 781.16 834.44
750.33

Comamonas testosteroni

1262.84 734.74 736.66 741.97 782.24
785.49 785.77 752.33 750.33 790.16

Coronavirus, human
(Common cold variety)

843.15 817.56 853.97 840.64 859.81 1112.04
1116.16 1107.96 975.43 977.96 888.15
1140.63 1113.69 1100.68 916.94 908.11

If time permits, the following regions can be run as sweeps:
1182.8 - 1184.7 1177.4 - 1179 1207.6 - 1217
1314 - 1322 1328 - 1334.2

Coronavirus, MERS
(MERS = Middle Eastern Respiratory Syndrome)

1202.17 1202.45 852.56 1374.12 1114.51
909.57 859.81 764.53 839.39 1140.63
858.50 836.91 911.77 916.20

Coronavirus, SARS covid-19
(Alternate names: SARS-CoV-2; COVID-19; Wuhan 2020 coronavirus;
Wuhan seafood market pneumonia virus; 2019-nCoV; Wuhan-Hu-1)
(SARS = Severe Acute Respiratory Syndrome)

846.93 898.73 775.00 1184.51 1187.31
850.71 850.36 850.83 851.07 1372.25
1371.31 1372.56 1373.18 1119.33 1368.20
1373.18 1246.15 764.53 1219.29 1079.68
1369.76 1370.69 1371.00 1371.62 1056.49

Corynebacterium diphtheriae

931.16 1178.65 813.45 733.79 733.31
787.96 1345.43 1378.20

Corynebacterium equi, see Rhodococcus equi

Corynebacterium jeikeium

1208.87 1219.29 736.66 737.14 738.10
738.58 739.06 735.70 736.18 730.47
730.95 731.18 731.42 731.65 731.89
1211.46 1214.06 736.66 740.51

Corynebacterium pseudodiphtheriticum

1188.55 1198.63 741.00 730.95 1300.58
701.48

Corynebacterium tuberculostearicum

1208.87 741.97 735.94 736.90 1265.66
744.41

Corynebacterium urealyticum

978.09 1000.54 1178.65 1240.68 1219.29
781.43 758.38 751.83 751.33 749.84
790.71 730.24 735.70 735.22

Corynebacterium vaginalis, see Gardnerella vaginalis

Coxiella burnetti

1208.87 1219.29 764.01 777.13 1165.30
783.32 783.86 1041.66 1305.08 787.96
714.33 867.72 969.3 921.78

Coxsackievirus A, types 1-12

Type 1:	1223.74	1368.62		
Type 2:	1223.58	1377.36		
Type 3:	1224.07	1377.99		
Type 4:	1217.65	1370.48		
Type 5:	1223.25	1376.74		
Type 6:	1217.65	1370.48		
Type 7:	1222.59	1376.11		
Type 8:	1223.91	1377.99		
Type 9:	1214.71	1370.48		
Type 10:	1221.76	1375.48		
Type 11:	1214.55	1214.39	1214.71	1363.67
Type 12:	1222.59	1376.74		

Coxsackievirus A, types 13-24

Type 13:	1213.90	1213.73	1213.57	1213.25	1213.08
	1362.44	1363.05			
Type 14:	1220.77	1376.11			
Type 15:	1216.51	1363.67			
Type 16:	1221.60	1221.10	1220.94	1375.48	
Type 17:	1213.90	1214.39	1214.06	1363.05	
Type 18:	1213.73	1213.41	1362.44		
Type 19:	1221.60	1366.76			
Type 20:	1217.33	1216.02	1366.76	1366.14	
Type 21:	1222.26	1222.42	1223.08	1366.76	1367.38
Type 22:	1222.26	1222.92	1223.08	1367.38	
Type 23:	1214.55	1214.87	1369.24		
Type 24:	1213.25	1362.44			

Coxsackievirus B types 1-6

Type 1:	1224.57	1225.07	1227.89	1228.06	1381.78	1382.41
Type 2:	1221.43	1222.75	1379.25			
Type 3:	1223.08	1223.25	1223.41	1223.91	1380.51	
Type 4:	1223.74	1224.07	1381.78			
Type 5:	1222.75	1222.92	1223.25	1380.51		
Type 6:	1223.58	1223.74	1381.15			

Cronobacter sakazakii

1229.90	734.27	733.79	735.22	732.84
729.53	780.08	779.81	779.54	779.27
780.35	773.15	773.41	779.27	752.33
772.89				

Cryptococcus gatti

(Alternate names: *Cryptococcus bacillisporus*; *Filobasidiella bacillispora*.
Fungal organism)

1160.93	963.80	749.34	1262.84	1014.80
740.51	1120.30	754.84	732.84	779.81
1063.44	1128.12	930.51	968.75	1297.60
1116.98				

Cryptococcus neoformans

(Fungal organism)

727.83	858.50	865.06	713.43	749.34
1348.63	977.96	740.51	1120.30	754.84
744.41	779.81	1063.44	1138.33	930.51
1297.60	968.75	800.22	848.20	1156.96
857.20	1340.64			

Cryptosporidium hominis

703.67 1251.66 1343.03 1342.24 1340.65
1219.29 1262.84 1350.24 1282.16 1376.94
1188.56 1178.65 1168.91 1159.33 1347.03
912.50 906.65 1322.09 1174.08 1053.49
1046.12 1084.50 868.68 907.30 867.72

Cryptosporidium parvum

1323.19 1175.15 1053.95 1049.11 1071.94
869.31 906.30 861.64 1294.63 1140.63
979.66 1288.00 811.70 1347.03 1308.85
1188.56 468.34

Cutavirus

1015.71 1015.68 1143.51 1078.65 1065.95
844.41 852.04 1324.17 1017.54 1028.64

Cutibacterium acnes, see Propionibacterium acnes

Cyclospora cayetanensis

(Protozoal parasite)

721.39 1060.11 753.83 834.13 862.43
984.77 784.68 752.33 1048.66

Cytomegalovirus, see Human herpesvirus 5

Debaromyces hansenii

(Alternate or older names: *Candida famata*; *Pichia hansenii*; *Torulaspota hansenii*; *Debaromyces tyrocola* variant *hansenii*. Fungal organism)

1228.98 958.50 838.15 702.80 764.53
1398.65 983.06 1206.29 836.91 732.84
806.49 1113.69 1272.78 1285.80 968.75
1229.90

Demodex brevis

(Common name, eyelash or small hair mite)

1273.95 1044.79 968.75 737.14 850.75
709.85 1048.66 854.61 1287.26 1202.45
829.55 881.92 1100.68 1379.88 1359.98
968.75

Demodex folliculorum

(Common name, eyelash or small hair mite)

1279.44 1053.54 859.81 735.70 862.43
711.64 1053.54 858.50 1296.11 1225.90
815.20 881.92 1198.63 1372.35 1369.86
949.25

Dengue virus general (types 1-4)

Most important numbers:

843.23 844.17 845.31 850.04 889.37
889.63 889.90 890.69

Additional numbers associated with less common variants:

844.25 844.33 845.51 846.30 847.97
848.12 849.72

Dental pathogens, common

See individual sets under the following names:

- Porphyromonas gingivalis
- Fusobacterium nucleatum
- Treponema denticola
- Streptococcus mutans

Dermatophagoides farinae

(Common name, American house dust mite)

1269.04	1113.69	857.20	730.00	749.34
723.47	1028.64	839.39	1258.63	1216.67
877.13	1039.99	1386.65	1282.88	912.50

Dermatophagoides pteronyssinus

(Common name, European house dust mite)

1274.66	1050.61	852.04	731.42	749.34
723.47	1025.84	839.39	1258.63	1208.87
859.81	877.13	1039.99	1387.50	1285.80
942.92				

Desulfovibrio desulfuricans

746.37	772.89	1240.68	727.19	728.12
736.18	770.78	772.62	772.36	787.96
781.43				

Desulfovibrio piger

1240.68	730.47	730.95	771.83	744.71
794.60	777.13			

Desulfovibrio vulgaris

805.91 812.86 1240.68 1219.29 1208.87
729.53 730.00 730.47 730.95 733.79
734.74 737.14 771.57 772.62 772.89
773.15 773.68 775.00 942.92 796.83
794.60 779.27

Dialister invisus

1222.31 1240.68 727.66 727.19 773.94
773.68 946.07 1386.65 827.12

Dicrocoelium dendriticum & chinensis

(Common names: Lancet liver fluke; Small liver fluke)

1213.65 1216.34 1170.12 1168.91 801.35
800.22 737.14 908.11 870.39 1014.80
1104.98 1258.63 1297.60 812.86 943.71
1075.57 727.19 1235.27

Dictyostelium discoideum

(Slime mold organism)

828.33 1274.22 878.50 1057.48 1396.92
987.35 865.73 967.92 725.79 1063.44
1187.31 771.83 781.43 1395.20 831.99
842.52 1217.98 717.96 810.53 1181.11

Dientamoeba fragilis

1274.22 883.99 1362.44 1350.24

Dipetalonema gracile

1326.60 1165.30 858.50 1374.85 810.53
1335.90 1039.99 973.76 1291.67 1339.06
834.44 920.67 1140.63 709.41 1265.66

Diphyllobothrium latum & Diphyllobothrium nihonkaiense

(Common name, broad tapeworm)

1330.40 1316.95 1170.12 1176.20 765.56
762.47 723.01 994.29 870.39 881.23
1023.06 1111.50 1271.35 1272.78 1288.73
794.60 819.93 905.20 1087.98 721.62
1235.27

Dipylidium caninum

(Common names: flea tapeworm, dog tapeworm, cat tapeworm)

1266.37 1167.70 777.13 1299.09 983.92
875.78 1045.75 1098.55 1267.08 822.31
907.38 1087.98 723.01 1243.41

Dirofilaria immitis

(Common name, dog heartworm)

1310.56 1170.12 824.71 1374.85 812.86
726.25 1047.69 983.92 1261.43 1324.95
841.89 920.67 1168.91 709.41 1251.66

Dirofilaria repens

(Filarial nematode parasite)

1323.88 1179.88 861.11 1374.85 812.86
726.25 1047.69 983.92 1291.67 1324.95
841.89 920.67 1198.63 710.74 1227.23

Eastern Equine Encephalitis Virus

773.41 774.87 774.94 775.00 775.34
776.27 780.08 781.29 1209.52 1210.00
1216.34 1219.29 1220.77 803.05 1214.06
1215.04

Ebolavirus, strain Zaire

954.91 1019.83 1107.15 1154.60 1114.78
1267.08 1034.28 1306.59 749.34 1363.67
807.06 1055.51 1227.23

Echinococcus

(Includes Echinococcus granulosus and Echinococcus multilocularis;
tapeworm)

1332.36 1317.81 1159.33 1152.24 809.37
804.77 704.11 973.76 873.07 874.42
1060.45 1104.98 1098.55 1267.08 1284.34
815.20 898.73 932.05 1087.98 708.08
718.87 1243.41

Echinostoma hortense

(Trematode parasite)

1207.42 1164.10 746.37 734.27 944.49
899.45 1054.52 1098.55 1258.63 1302.08
794.60 907.38 985.63 720.24 1260.03

Echovirus Type 7 (E7)

1374.85 1382.83 1383.89

Sweep the following ranges:

1216 – 1225 (most important range)

1240 – 1245

1307 - 1310

Echovirus 9 (E9)

1369.24 1375.48 1212.76 1214.55 1214.87

1216.51 1219.29 1219.95 1228.73 1236.28

1243.92 1288.00 1292.22 1303.58 1369.24

Echovirus type 11 (E11)

1374.23 1234.59

Sweep the following range:

1214 – 1229

Echovirus type 30 (E30)

1215.85 1216.67 1217.98 1218.31 1218.64

1218.80 1219.13 1234.42 1258.98 1374.85

E. coli, see *Escherichia coli*

Ehrlichia canis

881.09 1188.555 762.47 808.795 946.07

989.08

Ehrlichia chaffeensis

985.05 707.19 873.07 750.33 816.68
989.08 955.66

Eikenella corrodens

1262.84 740.03 740.51 785.49

Empedobacter brevis

1220.36 1309.61 805.34 816.38 915.46
712.53

Encephalitozoon cuniculi

(Fungal organism)

1198.63 1208.87 910.30 915.46 871.06
871.73 873.07 1379.48 733.60 744.87
1326.74 1372.70 1314.90 1278.45 1216.33
1154.03 1102.24 1082.82

Entamoeba histolytica

The following numbers should be run exact:

918.43 949.25 1162.90 1164.10 1116.98

The following number can be run plus and minus 3 hertz:

1302.83

Enterobacter aerogenes

744.41 772.89 781.43 1240.68 1229.90
1359.98 714.33 1188.55 741.00 776.60
741.97 738.58 728.59 780.35 780.08
779.81 779.54 779.27 779.00 778.74
774.47 773.94 815.20 811.11

Enterobacter cloacae, subspecies cloacae

1188.56 1178.65 1149.90 1240.68 1229.90
1219.29 733.79 732.84 732.37 730.00
740.51 728.59 728.12 779.00 778.74
777.93 777.67 779.81 778.47 779.27
752.33 756.35

Enterobacter sakazakii, see Cronobacter sakazakii

Enterobius vermicularis

(Common name, human pinworm)

1199.90 835.68 717.50 785.77 743.43
1013.89 889.55 1309.61 1337.48 849.48
924.43 1214.06 715.69 1312.65

Enterococcus faecalis

1285.80 1240.68 1229.90 785.22 730.95
789.61 778.20 777.67 758.38 732.84
1359.98 775.00

Enterococcus faecium

1285.80 1251.66 785.22 773.41 731.42
777.67 777.13 1274.22 1262.84 1229.90
1208.87 784.68 738.10 734.74 730.95
777.93 776.60 776.07 775.00

Enterococcus gallinarum

1229.90 1285.80 723.47 723.93 724.39
724.86 785.77 786.31 775.53 775.80
777.67 729.06 779.27 772.89 775.00

Enterovirus 68

1378.62 1379.25 1377.99 1234.42 1234.59
1234.76 1233.08 1231.90 1236.62 1228.73

Enterovirus 69

1221.43 1378.62

Enterovirus 70

1224.90 1224.74 1374.85

Enterovirus 71

1221.27 1221.60 1221.93 1222.26 1222.59
1375.48

Epidermophyton floccosum
(Fungal organism)

1171.41 1006.23 1098.55 818.45 796.83
1306.59 786.86 713.43 712.53 1396.92
721.62 1398.65 941.35 737.62 1051.58
1333.53 700.19 773.41 1154.01 944.49
968.75 993.42

Epstein-Barr virus, see Human herpesvirus 4

Escherichia coli

1262.84 1188.56 1178.65 1159.33 1149.90
734.74 734.27 733.79 731.89 731.42
730.00 728.59 728.12 726.72 723.01
780.08 779.81 779.54 779.27 779.00
778.74 778.47 778.20 777.13 776.87
775.80 1251.66 1032.39 1243.41 750.33

Eubacterium nodatum

1266.60 1219.29 815.20 785.22 803.63
968.75

Eurytrema pancreaticum
(Common name, pancreatic fluke)

1204.45 1136.05 756.35 730.00 944.49
850.75 1012.08 1092.19 1257.23 1282.88
819.93 886.06 1075.57 714.78 1260.03

Fasciola gigantica
(Large species of liver fluke)

1250.45 1148.74 734.74 734.27 939.79
882.61 1017.54 1092.19 1254.44 1306.59
794.60 892.35 1039.99 723.01 1251.66

Fasciola hepatica
(Common names: sheep liver fluke; common liver fluke)

1251.84 1147.57 739.54 881.23 738.58
939.79 1017.54 1039.99 890.25 1306.59
1254.44 794.60 1251.66 721.62 1092.19

Fasciolopsis buski
(Common name, intestinal fluke)

1220.53 1145.25 730.95 734.27 954.05
878.50 1020.29 1092.19 1254.44 1297.60
794.60 883.99 1039.99 720.24 1251.66

Filifactor alocis

1200.05 1219.29 737.62 779.54 801.35
836.91 777.13

Finigoldia magna

1289.14 1229.90 1208.87 1219.29 772.36
742.46 742.94 744.41 753.58 753.08
752.83

Flavimonas oryzihabitans, see Pseudomonas oryzihabitans

Francisella tularensis

740.03 740.51 742.94 743.43 766.86
783.32 784.68 789.88 790.71 790.99
1159.33 1198.63 1219.29 1240.68 1251.66
978.81 1220.62 1222.30 1223.58 1224.34
1225.51

Fusarium solani
(Fungal organism)

1149.87 743.92 942.92 952.44 755.60
755.34 965.45 1020.29 1369.86 1051.58
846.93 968.75 1262.84 1251.66 749.22
803.63 1300.58 717.96 994.29 1034.28
1359.98 1122.52 1188.55 776.60 875.78
1355.09 1134.91

Fusobacterium necrophorum

1219.29 1229.90 754.34 756.86 777.13
777.40 989.08

Fusobacterium nucleatum

1229.90 1219.29 753.83 750.83 754.34
773.41 788.50 779.00 787.41 807.93
827.12 996.04

Fusobacterium varium

1395.28 1219.29 742.94 777.13 824.71

Galactomyces candidum

(Also known as Geotrichum candidum; fungal organism)

1248.21 865.40 748.84 1390.05 761.44
1398.65 977.96 781.43 729.06 1072.52
1357.53 700.19 1161.11 954.05 1262.84
895.18

Gardnerella vaginalis

(Formerly known as Haemophilus vaginalis or Corynebacterium vaginalis)

1229.90 1219.29 746.87 768.16 767.64
739.30 739.06 743.19 745.39 745.64
912.50 915.46 909.60 716.14 714.33

Geotrichum candidum, see **Galactomyces candidum**

Giardia lamblia

(Also known as Giardia intestinalis)

The following frequencies should be run exact:

1246.15 1245.46 982.21 781.43 1306.59
1188.56 1125.88 944.49 1113.69 867.72

The following frequencies can be swept plus and minus 10 hertz:

827.6 858.27 1363.13

Gnathostoma spinigerum

(Parasitic nematode)

1285.89 1202.45 840.64 719.79 823.51
737.62 1054.52 978.81 1297.60 1359.98
844.41 924.43 1246.15 714.33 1294.63

Gongylonema pulcrum
(Common name, gullet worm)

1312.08	1173.76	831.99	1369.86	819.93
731.89	1063.44	1003.11	1300.58	1363.26
834.44	936.68	1246.15	715.69	1312.65

Gordonia bronchialis

1140.63	739.06	722.08	805.91	812.86
882.73				

Granulicatella adiacens

1205.00	1251.66	736.18	776.33	783.59
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Haemonchus contortus

(Common names: red stomach worm, barber pole worm)

1288.09	1189.80	805.91	715.24	817.56
736.66	1017.54	944.49	1297.60	1339.06
844.41	920.67	1224.57	715.69	1285.80

Haemophilus ducreyi

1229.90	735.22	734.74	782.24	740.51
736.66	781.43	772.89	726.77	728.89
1362.08	1305.16			

Haemophilus influenzae

The following numbers should be run exact:

1104.98 1188.56 1198.63 1240.68 1262.84
730.95 734.74 735.22 735.70 736.66
727.42 727.66 779.81 783.59 785.49
785.77 786.31 1045.75 918.43 1316.47
1314.94 1314.17 964.62 772.89

The following numbers can be swept with plus/minus 3 hertz:

1211.08 1227.92 1266.20 1278.15

Haemophilus parainfluenzae

1229.90 734.74 735.22 735.70 737.14
738.58 741.48 781.16 781.43 781.70
782.24 783.05 790.71 775.00 752.33
717.96

Haemophilus vaginalis, see Gardnerella vaginalis

Hafnia alvei

1229.90 733.79 778.20 778.47 778.74
779.27 750.33 777.13

Hantavirus

(Also known as Hantaan virus)

1385.59 701.16 1251.66 1328.45 1334.32
1337.48 1330.40 877.82

Hathewayia histolytica

(Previously known as Clostridium histolyticum)

845.49 1219.29 747.36 778.74 862.43
740.51 827.12

Heartland virus

(Also known as Heartland bandavirus)

1258.63 700.62 723.70 767.64 1277.09
1290.93 1320.69 1330.01 710.19 710.74
712.09

Helicobacter hepaticus

1288.01 1229.90 756.86 785.49
768.68 839.39474

Helicobacter pylori

(Previously known as Campylobacter pylori)

These frequencies should be run exact:

1047.69 1208.87 1055.51 753.83 755.85
755.34 762.21 760.93 760.68 784.68
925.94 746.87 989.78 825.16 1290.94
1285.8 702.42 1144.38 1157.99 966.07

These numbers can be swept with plus and minus 5 hz:

1389.39 704.85 725.81

Hendra virus

992.87 708.08 1065.95 824.71 1131.50
1069.47 1379.88 1247.52 1344.23 841.89

Hepatitis A virus

1354.49	1353.88	1355.70	1208.23	1209.03
1210.49	1210.65	1210.81	1211.30	1212.76
1214.55	1214.87	1215.85	1219.79	1225.23

Hepatitis B virus

711.19	703.89	714.56	702.58	1339.06
831.99	1219.29	1026.77	967.92	905.93

Hepatitis C general

Because hepatitis C virus is highly variable, the most common or important numbers are given first:

1002.22	1001.885	1000.56	1000.225	999.23	
994.62	993.31	1166.50	970.10	965.13	
961.346	957.89	957.99	941.84	957.48	933.20

After that, the most common range of genome-related frequencies falls at:
957-971 hz

The full range of currently known genomes (including some rarely-occurring strains) falls at:
932-982 hz.

This virus is sometimes a fast replicator; at such times, running the basic 16-item set on a frequent basis may be beneficial.

Hepatitis D (delta) virus

These frequencies should be run exact:

878.50 882.61 963.80 968.75

The following frequencies can be run as a sweep:

1340.50-1357.75

OR alternately, run the following individual frequencies:

1340.64 1341.44 1342.24 1343.03 1343.83
1344.63 1345.43 1346.23 1347.03 1347.83
1348.63 1349.44 1350.24 1351.05 1351.86
1352.66 1353.47 1354.28 1355.09 1355.91
1356.72 1357.53

Hepatitis E virus

The following frequencies can be run as a sweep, preferably with 1/4 to 1/3 Hz steps:

1240 – 1260 Hz

Hepatitis G virus

(Also known as Hepatitis GB virus C)

Most important numbers:

1061.45 1050.00 1036.65 1056.99 1051.10
1045.63

Next most important numbers (use all):

963.49 963.80 963.91 964.01 964.32
965.55 965.76 966.27 977.12 1011.17
1013.67

And the following numbers, as time permits:

969.90 972.40 980.61 982.53 988.21
991.68 994.40 1009.71 1011.06

Herpes simplex 1 virus, see Human herpesvirus 1

Herpes simplex 2 virus, see Human herpesvirus 2

HERV, see Human endogenous retrovirus

Heyndrickxia oleronia

1219.29	831.99	700.19	752.33	725.32
728.59	729.06	729.53	758.38	758.89
759.14	761.96	762.47	762.73	762.98
768.95				

Histoplasma capsulatum

(Fungal organism)

1388.35	1051.58	930.51	734.74	1042.86
787.96	1350.24	968.75	1262.84	789.69
813.74	919.88	925.35		

HIV-1

(Human immunodeficiency virus type 1)

These frequencies should be run exact:

1222.04 1026.45 817.12 883.42 1029.9
1025.03 1138.55 1170.17 1163.29 1007.41
712.63 818.06 1138.25 787.47

This range of frequencies can be run as time permits:

1964-1974 (i.e., 1969 plus and minus 5 hertz, preferably in 0.5 hertz increments);

OR further simplified, in 1 hertz increments:

1964 1965 1966 1967 1968 1969 1970 1971 1972
1973 1974

HTLV-1

(Human T-cell lymphotropic virus type 1; also known as Human T-cell leukemia virus type 1)

998.24 1001.00 1001.44 1001.77 1002.00
1002.11 1002.33 1020.75 1064.07 877.82
1032.16 994.29 841.27 771.83

HTLV-2

(Human T-cell lymphotropic virus type 2)

1009.82 1010.05 1010.27 1010.50 1010.72
1010.84 1011.06 1011.17 869.72 859.05
822.02 1104.98 1057.48 775.00

HTLV-3

(Human T-cell lymphotropic virus type 3)

1058.35 1014.57 1015.14 1015.60 892.35
896.60 1061.45 844.09 855.60 847.89
1032.39 1159.33 1075.57 764.01 767.12

Human endogenous retrovirus E
(HERV-E)

1274.58 1271.35 714.78 1092.19 1104.98

Human endogenous retrovirus HRES-1
(HERV HRES-1)

843.15 1359.98 1214.06 862.43

Human endogenous retrovirus K
(HERV-K; Strain capable of replication)

955.66 956.57 1131.50 1127.00 788.50
789.05 789.33 1069.47 1078.14 1087.99
1083.82 1334.32 900.88

Human endogenous retrovirus W
(HERV-W)

700.19 1037.13

Human foamy virus
(Also known as Human spumaretrovirus)

1367.17 757.24 1162.90 1319.15 762.98
1071.5 956.47 781.43 1254.44 1057.48
1173.76

Human Herpesvirus type 1
(Also known as Herpes Simplex 1 virus)

These frequencies should be run exact:

1158.14 1159.33 753.83 754.84 758.38
972.50 1161.71 896.60 833.83 737.14
735.7 825.31

The following frequency can be swept using plus and minus 5 hertz, in 0.5 or 1 hertz steps:

951.21 (i.e., a range of 946.21 – 956.21)

Human Herpesvirus type 2
(Also known as Herpes Simplex 2 virus)

These frequencies should be run exact:

978.39 1022.60 720.70 914.72 1144.09
911.77 833.83 784.68 735.70 1243.41

The following frequency can be swept using plus and minus 5 hertz in 0.5 or 1 hertz steps:

935.94 (i.e., a range of 930.94 – 940.94)

Human herpesvirus 3
(Also known as Varicella-zoster virus, Chickenpox virus)

1154.5 1155 1155.5 1156 1156.5
1157 1157.5 1158 1158.5 1159
1159.5 1160 1160.5 1161 762.47
806.49 1151.07 1353.47 809.66 726.25
1252.36 833.21

Human herpesvirus 4
(Also known as Epstein Barr virus)

These frequencies should be run exact:
983.92 1032.39 852.04 822.31 1245.46
1014.8 757.87 996.04 744.41 1175.59
829.55 814.91 1339.06 705.21 956.47
1336.69 843.15

The following frequencies can be swept using plus and minus 2 hertz in 0.5 or 1 hertz steps:
838.33 842.92 840.68 843.73

Human herpesvirus 5
(Also known as Cytomegalovirus)

The following frequencies can be run exact:
831.07 1347.83 1015.71 889.90 956.47
1010.27 767.12 1299.09 1350.24 1067.46
771.83 791.26 1400.38 996.04 1104.98
1032.39 846.93 1235.27 1219.29

The following frequencies can be swept using plus and minus 5 hz in 0.5 or 1 hertz steps:
1229.24 1263.76

Human herpesvirus 6a

909.06 946.07 1398.65 924.05 1321.85
1294.63 1037.13 1009.37 705.43 1284.34
967.93 908.11 1331.97 732.84 822.31
859.81 1054.03 898.38 996.04 768.69

Human herpesvirus 6b

893.4 896.39 946.07 1398.65 924.05
1321.85 1294.63 886.76 975.44 930.51
1087.99 1279.98 967.93 908.11 1331.97
730.00 820.53 992.11 996.70 786.86
1398.65 1028.64 1203.73 822.31 768.69

Human herpesvirus 7

These frequencies should be run exact:

980.51 1275.65 1158.14 916.94 1333.14
730.00 716.14 829.55 827.73 1215.32
1393.48 717.96

The following frequencies can be swept using plus and minus 5 hz in 0.5 or 1 hertz steps:

946.12 999.80

Human herpesvirus 8

(Also known as Kaposi's sarcoma virus)

892.00 900.88 925.19 1090.61 1315.70
827.73 777.13 731.89 1335.50 1100.68
775.00 1073.53 744.41 1331.18 838.77
827.42 1108.23 999.56

Human immunodeficiency virus, see HIV-1

Human/Mouse mammary tumor virus

914.81 918.89 1028.06 859.62 876.46
1274.93 1095.36 1176.20 1179.88

Human orthopneumovirus, see Respiratory syncytial virus

Human Papillomavirus type 1

1158.29 1160.37 1340.64 740.51 1006.68 1231.23 975.43
742.94 741.48

Human Papillomavirus type 2

1151.80 1151.21 1181.11 1017.54 1006.68
1171.94 962.98 710.74 718.87 738.58

Human papillomavirus type 3

1157.55 1235.27 1268.50 1143.51 983.06
796.27 708.08 747.36

Human papillomavirus type 4

1231.07 1340.64 927.46 1257.93 936.68
1038.08 723.01 730.00

Human papillomavirus type 5

1168.61 1196.09 909.57 1243.41 732.84
767.64 1118.09 727.19 730.00

Human papillomavirus type 6

1129.81 1130.09 1145.54 1251.66 955.66
1161.11 1023.06 859.81 1028.64 1297.60
820.53 753.33

Human papillomavirus type 7

1127.70 1126.30 1221.93 1219.29 844.41
1166.50 1004.00 825.92 745.88 787.96

Human papillomavirus type 8

1182.65 1211.46 909.57 1249.59 756.35
727.19 1390.05

Human papillomavirus type 9

1217.65 1268.50 1331.18 1006.68 1245.46
816.97 706.75 742.94

Human papillomavirus type 10

1143.08 1268.50 1087.98 1106.61 1001.33
801.35 750.33 709.41

Human papillomavirus type 11

1141.06 1141.35 1251.66 955.66 1161.11
1025.84 867.72 1028.64 1262.84 827.73
751.83

Human papillomavirus type 15

1221.27 1331.18 1006.68 1251.66 985.63
706.75 742.94

Human papillomavirus type 16

1188.55 955.66 1161.11 1031.45 985.63
1127.00 796.27 709.41 1144.67 1144.81
1144.96 1145.10 1145.25

Human papillomavirus type 17

1218.96 1218.80 1331.18 985.63 1237.29
833.21 958.90 702.80 718.87 742.94

Human papillomavirus type 18

1152.1 1188.55 892.35 1146.99 1031.45
1063.445 1279.98 815.20 1326.50

Human papillomavirus type 20

1166.95 1138.33 918.43 1245.46 757.87
824.71 727.19 730.00

Human papillomavirus type 24

1214.71 1340.64 975.43 1241.36 806.49
843.15 720.24 735.70

Human papillomavirus type 27

1157.11 1155.92 1188.55 1181.11 1028.64
1017.54 1171.94 970.42 811.70 776.60
1239.33 1268.50 727.19

Human papillomavirus type 28

1137.33 1285.80 1075.57 1138.33 1001.33
918.43 796.27 750.33

Human papillomavirus type 29

1143.51 1268.50 1039.99 1141.78 970.42
815.20 796.27 748.84

Human papillomavirus type 31

1144.09 1260.03 955.66 1197.99 1012.08
918.43 1113.69 808.22 747.36

Human papillomavirus type 33

1144.09 1144.52 1154.89 1155.63 1156.07
1260.03 965.45 1170.12 1066.45 1126.00
806.49 754.84 1246.15

Human papillomavirus type 35

1148.88 1148.01 1146.70 1145.97 1144.67
1260.03 946.07 1182.96 1025.84 975.43
1127.00 803.05 750.33

Human papillomavirus type 36

1170.12 1172.24 1196.09 918.43 1247.52
740.03 780.35 727.19 730.00

Human papillomavirus type 38

1223.25 1331.18 936.68 1247.52 853.97
994.29 714.78 738.58

Human papillomavirus type 39

1155.63 1151.66 1188.55 859.81 1164.70
1148.74 1017.54 1028.64 1297.60 801.35
745.88 1148.01 1155.78 1156.37 1157.99

Human papillomavirus type 40

1147.28 1219.29 844.41 1164.70 1031.45
859.81 1079.68 806.49 745.88

Human papillomavirus type 41

1188.87 1203.73 822.31 1227.23 972.92
927.46 1198.63 1359.98 1292.41 1214.06
1297.60 1229.90

Human papillomavirus type 43

1135.05 1211.46 946.07 1150.49 1014.80
822.31 813.45 709.41 1017.54 768.68

Human papillomavirus type 45

1151.95 1153.27 1153.42 1154.45 1188.55
883.99 1171.94 1023.06 813.45 702.36

Human papillomavirus type 47

1171.63 764.53 909.57 1245.46 744.41
1237.97 727.19 732.84

Human papillomavirus type 49

1197.36 1359.98 909.57 1237.29 771.83
723.01 740.03

Human papillomavirus type 50

1260.03 1331.18 1006.68 1257.93 950.84
1285.80 744.41 731.42

Human papillomavirus type 51

1158.88 1158.73 1158.44 1158.29 1243.41
927.46 1188.55 1051.58 1075.57 803.05
747.36 1158.14 1158.59

Human papillomavirus 52

1135.19 1136.90 1137.19 1138.48 1139.48
1140.49 1140.92 1141.06 1268.50 946.07
1164.70 1023.06 965.45 808.22 712.09
1246.15

Human papillomavirus type 53

1151.22 1219.29 892.35 1184.82 980.51
813.45 754.84

Human papillomavirus type 54

1166.65 1166.50 1173.00 1175.44 1303.58
985.63 1190.43 1188.55 1186.68 1025.84
1028.64 700.19 705.43 801.35 757.87
754.84

Human papillomavirus type 56

1150.78 1153.86 1157.25 1162.01 1165.60
1211.46 892.35 1184.82 1014.80 1390.05
811.70 754.84 705.43

Human papillomavirus type 58

1155.19 1156.81 1156.96 1157.11 1157.55
1157.99 1158.44 1260.03 955.66 1170.12
1051.58 1063.44 797.96 756.35 1229.90

Human papillomavirus type 59

1146.12 1146.26 1146.41 1173.76 875.78
1170.12 1017.54 815.20 1279.98 811.70
741.48

Human papillomavirus type 62

1118.64 1268.50 975.43 1155.78 993.42
900.88 792.93 748.84 1010.27

Human Papillomavirus type 66

1156.96 1157.11 1157.85 1158.14 1211.46
892.35 1196.09 1020.29 1104.98 811.70
748.84 704.11 701.49 705.43 1079.68

Human papillomavirus type 88

1235.60 1321.85 955.66 1241.36 941.35
968.75 723.01 738.58

Human papillomavirus type 91

1136.33 878.50 955.66 1154.01 1017.54
822.31 818.74 1268.50

Human papillomavirus type 95

1233.75 1340.64 946.07 1253.74 939.01
1124.76 718.87 731.42

Human parainfluenza virus types 1-4

Human parainfluenza virus type 1

(also known as Human Respirovirus type 1)

718.87 858.50 1326.50 921.42 1038.08
1073.53 1081.74 1357.53 1310.37 1356.92

Human parainfluenza virus type 2

(also known as Human Rubulavirus type 2)

1387.50 835.68 998.68 1367.38 1319.54
1332.95

Human parainfluenza virus type 3

(also known as Human Respirovirus type 3)

731.42 944.49 1251.66 1011.17 1066.45
1397.78 1317.23 1350.85

Human parainfluenza virus types 4a & 4b

(also known as Human Rubulavirus type 4)

1367.38 943.71 945.28 821.12 985.63
1384.95 1387.50 1301.33 1323.59

**If time permits, a sweep can also be added for types 1 and 2:
1156-1178 Hz**

If the viral type is unknown, run most common types, or all types. Type 1 is often seen in children; types 1 & 2 can cause croup, upper and/or lower respiratory illness; type 3 can cause bronchitis, bronchiolitis & pneumonia; type 4 is possibly less severe, but can cause neurological complications. For more information, see <https://www.cdc.gov/parainfluenza/seasons.html> and <https://www.cdc.gov/parainfluenza/about/symptoms.html>, or other websites.

Human parvovirus B19

(Also known as Erythrovirus B19)

808.79 808.94 809.08 1123.08 965.04
1359.98 1262.84 1154.60 996.04

Human respirovirus, see Human parainfluenza virus

Human rubulavirus, see Human parainfluenza virus

Human spumaretrovirus, see Human foamy virus

Human T-cell lymphotropic virus type 1, see HTLV-1

(Also known as Human T-cell leukemia virus type 1)

Human T-cell lymphotropic virus type 2, see HTLV-2

Hymenolepis diminuta

(Common name, rat tapeworm)

1302.45	1171.33	799.08	729.53	978.81
870.39	1031.45	1098.55	1271.35	1284.34
815.20	920.67	1087.98	718.87	1235.27

Hymenolepis nana

(Common name, dwarf tapeworm)

1315.32	1171.33	797.96	714.78	989.08
878.50	1031.45	1098.55	1267.08	1279.98
815.20	936.67	1087.98	718.87	1235.27

Influenza A virus

992.98	995.60	1052.56	1331.18	1333.53
756.36	803.06	805.91	746.375	965.45
817.56	775.00			

Influenza A virus, "Swine" (2009)

992.98	995.60	1052.56	1331.18	756.35
803.05	775.00	858.50	844.41	965.45
746.37	1059.46			

Influenza B virus

1002.22	768.68	1339.06	758.38	859.81
1288.00	1345.43	978.81	1038.08	808.22
936.68				

Japanese Encephalitis Virus

824.71 824.64 825.16 825.24 825.31
825.54 825.61 825.69 879.01

JC virus

882.26 882.61 883.30 883.64 883.81
883.99 884.16 884.33 884.68 884.85
885.20 885.54 886.06 886.24 1315.70
1094.3 835.68 1063.44 1095.36 1092.19

Kingella kingae

1285.80 742.46 784.13 777.13 936.68
788.50 1124.76 792.93 1064.44 875.78

Klebsiella oxytoca

The following frequencies should be run exact:

1229.90 728.59 778.47 778.20 746.87

The following frequency can be swept plus and minus 3 Hz:

775.79

Klebsiella planticola

1229.90 795.15 779.54 781.43 748.35
760.42

Klebsiella pneumoniae, subspecies pneumoniae

871.97 733.31 779.54 1159.33 823.48
1346.33 817.51 1062.69 1301.33 860.97
797.25 1277.45 1078.65 1320.35 1292.27
1269.93

Kluyvera ascorbata

1188.55 1229.90 735.22 729.53 778.74
781.73 772.89

Kocuria kristinae

1208.87 737.62 731.18 760.42 725.32
If time permits, sweep from 984 – 1056 Hz.

La Crosse virus

1296.85 1297.04 1332.95 1149.90 1151.07
800.22 1017.54 999.78 1000.00 1000.22
1000.45 1046.48

Lactobacillus iners

725.79 775.00 777.13 779.27 790.16
1219.29 716.14 716.59 718.41 718.87
721.62 723.01 779.81 780.08 780.35
780.62 780.89 781.16

Legionella pneumophila

The following frequencies should be run exact:

1113.685 1131.50 1208.87 733.31 750.33
767.64 780.08 813.45 791.26 776.87
1396.92 1210.33 1098.17

The following frequencies can be swept plus/minus 3 hertz:

1295.87 1322.82 1364.03 1385.26

Leishmania braziliensis

The following frequencies can be considered primary:

1063.44 726.25 1024.91 1281.43

The following frequencies can be considered secondary:

1230.87 945.88 1037.07 1242.98 915.98
885.72 954.50 831.95 833.89 817.80
767.54 871.08 1389.07 790.85 880.65
726.57 1366.63 1254.15 1149.14 951.75
987.27 973.40 745.16 852.03 723.14
733.51 770.17 1151.36 862.48 1217.16
1261.18 1100.49 988.40 1232.32 1040.63

Leishmania donovani

The following frequencies can be considered primary:

1083.82 730.95 1334.32 1270.64 1229.90
936.68 1188.55 721.62

The following frequencies can be considered secondary:

1021.99 866.45 742.83 1208.28 1280.50
1093.99 957.96 1145.56 984.04 1037.91
998.46 1017.15 891.53 898.05 936.89
829.50 862.76 787.55 765.12 769.75
755.09 822.02 739.63 1320.98 1290.44
1094.87 1131.41 988.85 920.78 843.18
756.66 742.77 796.89 1323.53 1096.20 854.08

Leptospira

(Includes the species *Leptospira interrogans* and *Leptospira borgpetersenii*)

The following frequencies should be run exact:

1188.56 1219.29 748.85 749.34 750.33
762.73 764.53 777.40 783.32 815.20
766.34 765.31 730.95 870.39

The following frequencies can be swept plus and minus 3 hertz:

1069.80 1083.57 806.99 827.19
1282.25 1295.87 912.80 966.32

Lichtheimia hongkongensis

(Also known as *Lichtheimia ramosa*, *Absidia ramosa*, or *Mycocladius ramosus*; fungal organism)

1137.55 816.97 830.16 713.43 737.62
709.85 962.98 726.25 1158.14 750.33
792.93 836.91 1146.99 954.05 1262.84
968.75

Lichteimia ramosa, see **Lichteimia hongkongensis**

Listeria monocytogenes

1229.90	1297.60	728.12	732.37	749.34
761.96	772.09	772.36	771.00	772.00
776.00	779.78	783.32	785.46	786.99
796.11	798.04	799.23	802.76	805.13
808.36	810.86			

Ljungan virus, see **Parechovirus B**

Loa loa

(Common name, African eye worm)

1332.16	1178.65	840.64	1376.53	810.53
726.25	1041.90	973.76	1296.11	1343.93
841.89	920.67	1193.57	709.41	1243.41

Louping ill virus

832.68	883.64
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Magnusiomyces capitatus

(Also known as *Dipodascus capitatus*, *Blastoschizomyces capitatus*, *Geotrichum capitatum*, *Blastoschizomyces pseudotrichosporon*; fungal organism)

832.64	772.62	706.31	1387.50	755.34
1358.35	977.96	707.19	1097.48	1377.36
700.19	789.61	1039.99	1150.49	949.25
968.75	1214.06			

Malassezia furfur

(Common name, tinea [pityriasis] versicolor infection agent; also known as Pityrosporum ovale, Saccharomyces ovalis; fungal organism)

The following frequencies should be run exact:

1037.13 907.02 907.38 898.38 871.73
709.41 758.38 1334.32 970.42 734.43
1094.30 1387.50 732.84 996.04 1128.12
870.39 949.25 1279.98 726.25

As time permits, the following frequencies can be run as a sweep:

734 – 756

Malassezia globosa

(Fungal organism)

1040.22 1043.79 936.29 806.49 856.55 857.20
713.43 773.94 1353.47 972.92 743.43
1110.41 1395.20 738.58 742.94 955.66
1119.75 870.39 1279.98 930.15 1267.08

Malassezia restricta

(Fungal organism)

838.15 838.77 911.40 911.77 713.43
715.24 1127.00 975.43 749.34 1113.69
1397.78 1390.05 745.88 867.72 1129.81
1087.98 1214.06 1279.98 1217.98

Malassezia sympodialis

(Fungal organism)

937.50 935.90 713.43 1172.54 1032.39
720.70 1353.47 972.92 773.94 709.85
949.25 1279.98 1084.86 702.80 744.41
747.36 1028.64 1186.68 874.42 1383.26

Mansonella ozzardi
(Filarial nematode)

1323.30 1167.70 852.04 1369.86 810.53
726.25 1041.90 968.75 1291.67 1353.47
762.47 925.19 1154.60 709.41 1173.76

Mansonella perstans
(Filarial nematode)

1329.32 1114.78 852.04 1369.86 807.06
726.25 1041.90 968.75 1291.67 1356.72
1164.10 911.77 1214.06 730.00 1321.85

Marburg virus

809.66 947.31 947.26 947.21 947.16
947.11 947.86 948.15 727.19 805.91
795.43 906.65 879.86 1168.91 1168.61

Massilia timonae

767.53 776.42 1262.84 734.74 735.70
778.74 783.32 783.59 790.43 781.43
812.86 790.16

Measles virus

(Also known as Red measles virus or Rubeola virus; not the same pathogen as Rubella virus, the causative agent of German measles)

1139.05 717.50 742.94 1010.27 1123.64
1369.86 1221.27 1381.78

Merkel Cell Polyomavirus

840.17 870.22 729.06 1214.06 1043.82
962.98 803.05 1010.27 890.25 780.35
958.90

MERS Coronavirus, see Coronavirus, MERS

Metagonimus yokogawai

(Fluke parasite)

1186.53 1162.90 743.43 735.70 843.15
850.75 1004.00 1098.55 1246.15 1293.15
794.60 881.92 1075.57 720.24 1227.23

Metastrongylus

(Includes the species *Metastrongylus salmi* & *Metastrongylus pudentotectus*; common name, pig lungworm)

1313.98 1312.55 1181.11 809.37 718.87
814.03 734.74 1017.54 1014.80 949.25
939.79 1271.35 1225.90 1328.06 1332.75
829.55 920.67 927.46 1214.06 1183.58
714.78 713.43 1294.63

Methanobrevibacter arboriphilus

968.26 1188.55 766.60 757.11 982.21

Methanobrevibacter smithii

1250.47 1357.04 1359.24 1262.84 1219.29
1188.55 1168.91 767.64 767.12 802.20
799.93 784.68 1262.84

Methanosphaera stadtmanae

1311.14 1229.90 1168.91 759.91 790.99
790.71 790.43 786.59 777.93 777.67
777.40 812.86

Meyerozyma guilliermondi

(Also known as *Candida guilliermondi*, *Pichia guilliermondi*; fungal organism)

1165.37 889.90 837.53 706.75 780.35
1398.65 980.51 764.53 1210.16 815.20
815.20 727.19 829.55 1113.69 1310.37
1285.80 968.75 1229.90

Micrococcus luteus

862.43 857.20 1229.90 1219.29 1387.50
731.89 745.15 732.37 873.07

Microfilaria general

(Intended for situations in which the exact species is unknown)

726.25 709.41 920.67 841.89 810.53
1376.53 1374.85 973.76 968.75 983.92

If time permits, sweep this range:

1310 – 1333

Microsporium canis

(Common name, ringworm; fungal organism)

756.13 1008.02 1087.98 818.15 801.35
713.43 709.85 1396.92 965.45 737.62
1051.58 1335.90 700.19 773.41 1152.24
935.13 968.75 988.21 740.51

Microsporium ferrugineum & Microsporium audouinii

(Common name, ringworm; fungal organism)

755.72 749.06 795.15 818.15 713.43
709.85 1398.65 965.45 740.51 1051.58
1335.90 700.19 773.41 1152.24 935.13
968.75

Mobiluncus curtisii

The following frequencies should be run exact:

1229.90 741.00 731.42 883.99

If time permits, sweep this range:

1080 Hz – 1110

Molluscum Contagiosum Virus

760.80 800.22 854.61 953.25 846.30
900.88 780.35 1014.80 787.96 708.08
835.06 833.21 793.48 723.47 1186.68
1111.50 824.71

Moraxella catarrhalis

1251.66 740.03 716.82 717.28 790.16
836.91 744.41

Morganella morganii

1347.03 1285.80 1240.68 1229.90 739.55
794.60 780.08 872.40 819.34 779.00
778.74 1061.20 762.47 777.13 779.27

Mortierella verticillata, see Podila verticillata

**Mucor circinelloides
(Fungal organism)**

1137.51 816.97 824.71 713.43 875.78
965.45 737.62 1393.48 962.98 726.25
1137.19 750.33 792.93 1063.44 1146.99
954.05 958.90 968.75 1262.84 781.43

Mumps virus

1176.81 1372.35 964.62 839.39 1004.00
1400.38 817.56 1294.63 1334.12

Mycobacterium abscessus

1219.29 743.43 726.49 700.19 768.68
752.83 727.42 1229.90 776.37

Mycobacterium avium

1262.84 1229.90 733.31 746.37 728.12
727.42 772.89 719.79 703.45 954.02
846.43

Mycobacterium avium subspecies hominissus, see **Mycobacterium hominissus**

Mycobacterium avium subspecies paratuberculosis, see **Mycobacterium paratuberculosis**

Mycobacterium bovis

1059.46 1066.54 1240.68 736.66 721.39
924.43 933.58

Mycobacterium fortuitum

1251.66 739.06 740.03 723.01 719.79
721.62 768.68

Mycobacterium hominissuis

(Also known as **Mycobacterium avium subspecies hominissuis**)

770.78 719.79 1262.84 733.31 734.74
736.66 724.86 726.95 728.12

Mycobacterium intracellulare

1262.84 742.94 733.79 727.19 726.95
705.43 770.78

Mycobacterium kansasii

724.10 1251.66 734.27 729.06

Mycobacterium lentiflavum

785.30 1262.84 745.39 734.03 705.43
770.78

Mycobacterium leprae

709.05 709.08 1262.84 1274.22 730.95
738.58 724.86 725.56 768.68 770.78
1356.72 906.65

Mycobacterium marinum

1262.84 1251.66 1229.90 733.79 735.70
745.39 727.89 729.53 924.43 775.00
1331.18 1257.23 1208.87

Mycobacterium paratuberculosis

(Also known as *Mycobacterium avium* subspecies *paratuberculosis*)

959.60 1240.68 733.31 727.89 831.99
772.89

Mycobacterium tuberculosis

1240.68 1274.22 1262.84 736.66 737.14
744.90 721.16 721.39 721.85 924.43
933.58 772.89

As time permits, sweep between the frequencies:
1047.50 – 1055.00

Mycolicibacterium mucogenicum

1251.66 743.92 744.41 727.42 727.89
728.12 703.67 762.47

Mycoplasma arthritidis

706.11 1373.185 895.53 828.33 719.79
1157.25

Mycoplasma fermentans

1334.32 730.95 731.89 784.40 784.68

Mycoplasma genitalium

1309.61 745.39 775.80 750.33 730.95
998.71

Mycoplasma hominis

764.53 933.58 1347.03 1359.98 1373.18
747.85 741.00 740.03 784.95 776.87

Mycoplasma penetrans

1297.60 778.74 790.16 852.81

Mycoplasma pirum

1365.87 1379.64 1359.98 737.14 777.67
708.96 787.96

Mycoplasma pneumoniae

732.84 764.53 1321.85 737.14 740.03
748.35 778.74 778.47 779.27

Also carefully sweep the small range:
708.80 – 709.65

Mycoplasma salivarium

811.93 1359.98 805.34 781.70 975.43
738.58

Nannizzia gypsea, see **Arthroderma gypseum**

Nannizzia nana, see **Arthroderma nana**

Necator americanus, see **Ancylostoma duodenale**

Neisseria gonorrhoeae

1075.86 1038.21 1219.29 1262.84 732.84
740.51 777.93 779.54 779.81 783.32

Neisseria mucosa

1262.84 740.51 784.13 783.32

Neorickettsia sennetsu

1348.84 1309.61 755.34 816.68 792.37
895.18

Nocardia cyriacigeorgica
(Formerly classified as *Nocardia asteroides*)

1219.29 745.88 743.43 716.14 715.92
721.85 721.62 721.39 1363.26 768.68

Nocardia farcinica

736.55 1159.33 741.97 741.48 723.01
722.77 722.54 764.53 829.55

Norovirus & Norwalk virus

1197.68 887.63 1395.20 701.93 1194.36
1196.73 1199.58 1200.38 1201.33 1203.57
888.67 843.46 1369.86 1377.36 1387.50
1397.78 704.11 726.25 729.06 740.51

Novosphingobium aromaticivorans

1301.29 785.16 1188.94 1240.68 765.56
813.45 859.81 794.60 988.21 816.97

Ochrobactrum anthropi

1251.66 767.12 869.05 779.27 859.81
802.59 1222.27

Olsenella uli

1129.36 1229.90 747.36 771.30 768.68
777.13

Onchocerca volvulus

(Filarial nematode)

1316.95 1165.30 828.33 1374.85 810.53
726.25 1045.75 968.75 1258.63 1329.62
836.91 918.43 1168.91 709.41 1260.03

Opisthorchis felineus

(Common name, cat liver fluke)

1267.88 1139.48 726.25 1254.44 1302.08
794.60 886.06 705.43 1227.23 1075.57
724.39 958.90 877.14 1014.80 1098.55

Opisthorchis viverrini

(Common name, Southeast Asian liver fluke)

1340.05 1139.48 732.84 730.00 878.50
1020.29 1098.55 1254.44 1302.08 794.60
886.06 1075.57 705.43 774.47

Orientia tsutsugamushi

(Previously known as Theileria tsutsugamushi, Rickettsia tsutsugamushi, Rickettsia orientalis, or Rickettsia akamushi)

1251.66 752.83 754.34 804.20 808.51
803.91 736.66 766.60

Orientobilharzia turkestanicum, see Schistosoma turkestanicum

Pantoea agglomerans

1229.90 783.59 781.43 777.13 772.89
748.35 750.33 729.53 730.00 730.47
730.95 732.37 733.31 733.79 735.70
771.04 771.30 769.73 776.87 777.40
777.67 778.47

Pantoea ananatis

1229.90 1240.68 982.21 772.89 952.44
734.27 735.22 735.70 736.18 739.55
740.03 740.51 741.00 779.00 779.27
779.54

Parachlamydia acanthamoebae

754.24 1219.29 730.00 746.13 768.68
783.59 1277.09

Paracoccidioides brasiliensis

(Fungal organism)

1015.16 862.43 798.52 1061.45 740.51
1388.35 970.42 746.37 1048.66 705.43
1188.55 767.12 836.91 1255.83 1015.71
968.75 1262.84 865.40 744.41

Paragonimus westermani

(Common name, Oriental lung fluke)

1209.76 1147.57 1012.08 737.14 944.49
878.50 1104.98 1271.35 1306.59 794.60
939.01 1100.68 714.78 1251.66

Parainfluenza virus, see Human parainfluenza virus

Parvovirus B

(Also known as Ljunganvirus)

**1192.63 1185.29 1185.60 1337.08 1338.27
1338.86**

Parvimonas micra

(Formerly known as Peptostreptococcus micra)

**1229.90 1240.68 707.19 739.55 740.03
747.85 779.81 780.08 780.35 780.62
780.89 788.23 852.04 815.20**

Parvovirus B19, see Human parvovirus B19

Pasteurella multocida

**1198.63 1229.90 1240.68 740.03 730.95
759.40 758.89 757.87 781.16 780.35
779.27 779.00 781.43 780.89 772.89
746.37 781.43**

This range can be swept as time permits:

962 – 987

Pediculus humanus capitis

(Common name, human head louse)

1244.78	1022.14	969.58	824.71	996.92
1023.06	804.77	795.71	1359.98	827.12
1163.50	1305.08	760.93	925.19	720.24
793.48	1398.65	1120.30	870.39	1302.08
1158.14	781.43	857.85	1051.58	1343.03
1079.68	1031.45	764.53	765.56	740.51

Penicillium chrysogenum

(Formerly known as *Penicillium notatum*; fungal organism)

1340.20	888.67	1133.77	1328.84	743.43
1398.65	977.96	731.89	1072.52	1340.64
1390.05	771.83	1051.58	1143.51	870.39
968.75	943.71	1262.84	922.92	

Penicillium citrinum

(Fungal organism)

1314.89	748.60	708.08	1321.85	704.55
1398.65	977.96	731.89	1072.52	1345.43
1390.05	771.83	1051.58	1145.25	870.39
1262.84	968.75			

Penicillium digitatum

(Fungal organism)

1249.50	809.95	737.62	1083.82	1260.38
1274.93	734.43	1398.65	977.96	731.89
1072.52	1340.64	1390.05	771.83	1051.58
1143.51	870.39	1262.84	968.75	943.71

Penicillium marneffeii
(Fungal organism)

1021.73	955.46	819.93	1343.03	749.34
1398.65	975.43	734.74	1048.66	1301.33
1390.05	773.41	1051.58	1145.25	968.75
1262.84	968.75	894.47		

Penicillium notatum, see **Penicillium chrysogenum**

Peptostreptococcus anaerobius

808.22	854.61	1006.68	740.51	1219.29
773.94	775.00	780.89		

Peptostreptococcus magnus, see **Finegoldia magna**

Peptostreptococcus micros, see **Parvimonas micros**

Peptostreptococcus stomatis

1165.63	1219.29	780.08	764.53	1003.11
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Pichia guilliermondi, see **Meyerozyma guilliermondi**

Pichia kudriavzevii, see **Candida krusei**

Photorhabdus asymbiotica

915.07	1234.51	1229.90	1188.55	760.42
950.44	785.77	875.78		

Plasmodium falciparum

1st priority: 758.51 1348.63 735.70 1001.33

**2nd priority: 1053.54 1178.65 1103.10 1082.26 1194.51
892.71 1157.85 1285.8 733.08**

**3rd priority: 790.16 895.18 714.33 1184.82 777.13 717.96
878.50 1188.56 719.58 1293.15**

If time permits, these numbers can also be used:

**900.57 1223.37 1092.99 962.25 862.39
840.37 857.28 874.07 751.54 1367.60
1138.59 1020.18 848.10 704.14**

Plasmodium vivax

1st priority: 769.47 769.60 715.24 787.96 789.61 1001.33

**2nd priority: 1017.54 1225.90 1036.41 1168.91 1095.89
1164.10 1109.59 930.51 1053.05 760.42
841.89 1122.52 1163.50 867.72 1095.89**

Pneumocystis jiroveci

(Formerly known as Pneumocystis carinii; fungal organism)

**790.81 776.33 1320.31 1067.46 714.78
773.94 720.70 980.51 737.62 1081.74
781.43 844.41 791.26 1063.44 1364.90
1079.68 968.75 1262.84**

Podila verticillata

(Fungal organism)

**1232.72 1371.94 759.40 1155.78 705.43
1363.26 709.85 975.43 734.74 1172.54
717.50 944.49 760.93 1075.57 1134.91
939.79**

Poliovirus

(Types 1, 2, and 3)

1365.52	1366.76	1367.38	1215.85	1216.02
1216.18	1216.34	1216.51	1216.67	1216.83
1217.33	1217.49	1217.65	1217.82	1217.98
1218.14	1210.49	1214.06	1237.97	

Porphyromonas endodontalis

1122.46	1285.80	767.64	800.22	781.43
1386.65				

Porphyromonas gingivalis

1297.60	1321.85	743.92	744.41	744.90
767.64	781.43	798.80	799.08	710.74
822.31	1396.92			

This range can be swept as time permits:
984-991

Powassan Virus

883.38	835.14	869.13
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Prevotella bivia

1262.84	738.58	778.47	778.20	779.27
779.00	740.51	710.74		

Prevotella buccalis

(Also known as Bacteroides buccalis)

700.43 700.58 1262.84 739.06 779.81
779.00 778.20 777.93 777.13 710.74

Prevotella copri

1262.84 1274.22 736.18 744.90 780.89
781.97 782.24 712.53 714.33 1315.70
1309.61 707.19 819.93

Prevotella denticola

1262.84 1285.80 736.66 780.35 780.08
867.72 740.51 708.96 710.74

Prevotella intermedia

884.99 784.68 841.89 858.45

Prevotella melaninogenica

730.95 1262.84 1297.60 1309.61 764.53
766.08 834.03 798.24 797.96 714.33
865.06 707.19

Prevotella nigrescens

744.90 779.27 865.06 887.10

Prevotella oralis

1359.98 1274.22 734.74 743.43 744.41
765.82 766.34 766.86 700.19 808.22
707.19 708.96

Prevotella oris

1262.84 1274.22 736.66 737.14 778.20
778.47 779.00 708.96 1386.65

Prevotella tannerae

897.17 1297.60 745.88 1285.80 784.95
708.96 900.88

Propionibacterium acnes

(Also known as Cutibacterium acnes)

1219.29 1168.91 740.03 748.84 748.35
751.33 742.46 735.46 735.22 734.50
734.27 734.03 733.79 736.42 1373.18
865.06 744.41 857.20 859.81 764.53
782.78 782.51 784.13 1024.91 1017.54

Propionibacterium propionicum

1343.62 1219.29 768.68 725.79 895.18

Proteus mirabilis

1188.55 734.27 933.58 934.36 936.67
937.45 939.79 777.13 1140.52 997.77

Proteus vulgaris

1229.90 1240.68 1262.94 756.35 754.34
772.89 768.68 728.59 731.89 730.95
740.51 739.55 772.62 775.00 708.52
706.09 728.83 772.09 779.27 742.70
742.46 767.64 754.08 759.14 755.34
713.21

Protochlamydia amoebophila

959.77 1219.29 764.53 1261.43 767.90
702.80 701.93 906.65

Providencia alcalifaciens

1229.90 1240.68 750.83 751.33 734.27
740.51 779.27 779.54 942.92 777.13

Providencia rettgeri

1240.68 733.31 733.79 734.27 741.00
778.74 772.36 770.52 770.25 770.78
771.04 742.94 742.70 743.19 716.14
716.60 779.27 758.38 781.43

Providencia stuartii

1229.90 1240.68 734.27 778.47 749.09

Pseudomonas aeruginosa

1188.56 1079.68 1229.90 737.14 741.97
736.18 756.35 783.05 783.59 784.95
780.35 803.63 810.53 794.60

Pseudomonas fluorescens

1113.69 1188.55 1198.63 1240.68 735.70
736.18 740.03 740.51 741.48 782.24
782.51 782.78 780.35 801.35 968.75
975.43 727.19

Pseudomonas luteola

(Also known as *Chrysomonas luteola*)

1229.90 736.66 783.05 783.32 783.59
801.35 799.08 792.37 1084.54 1259.47

Pseudomonas mallei, see *Burkholderia mallei*

Pseudomonas oryzae

1229.90 736.66 776.87 777.13 796.83
799.08 803.63

Pseudomonas putida

1229.90 1188.55 754.34 962.16 790.16
729.06 712.53 710.74 730.95 731.89
735.70 736.18 738.58 740.03 740.51
741.00 741.97 745.88 775.80 776.07
776.33 776.87 779.81 780.08 780.35
781.97 782.24 782.51 782.78 783.32

Pseudomonas stutzeri

1229.90 736.66 783.05 794.60 748.35
787.96

Pythium insidiosum

(Parasitic algae-like oomycetic pathogen)

1316.92 854.29 754.34 762.47 734.74
1233.92 983.06 777.13 1158.14 757.87
794.60 767.12 936.68 1123.08 882.61
740.03 727.19 1246.15

Ralstonia pickettii

741.97 739.55 786.86 803.34 1262.84
1274.22 1028.64 794.60 1270.56 1175.54
875.57 889.75 743.15 1060.52 704.47
894.76

Respiratory syncytial virus

(Also known as Human orthopneumovirus)

1189.06 1189.3 1191.8 1063.44 1065.45
1127.00 1129.25 939.79 940.57 941.35
1239.33 1272.78 1182.34 1183.58 1383.26
1227.23 1228.56 1189.8 1190.43 1178.65
1376.32

Rhinovirus

Sweep the following ranges, with a minimum of 1/2 Hz spacing (1/4 Hz spacing or smaller may be even more effective):

- 1392.5 - 1404.00 (1/2 Hz spacing entails about 23 steps)
- 1253.00 - 1279.00 (1/2 Hz spacing entails about 52 steps)

Due to the size of the set, you may want to run each step only for 90-120 seconds or less. Then if time permits, repeat the entire set.

Rhizopus oryzae

(Formerly known as *Rhizopus arrhizus*; fungal organism)

1336.64 786.59 796.27 1381.57 713.43
737.62 709.85 975.43 732.84 968.75
1158.14 720.24 756.35 792.93 1063.44
1150.49 878.50

Rhodococcus equi

(Formerly known as *Corynebacterium equi*)

1219.29 1229.90 739.06 738.58 751.33
722.08 721.85 810.53 898.35

Rickettsia africae

907.54 819.93 753.83

Rickettsia akari

941.19 1240.68 754.84 814.03 708.96
994.29

Rickettsia coronii

(Spotted fever pathogen)

1240.68 750.83 818.74 812.86 820.82
821.12 1100.68 1092.19 895.18 1109.32
1113.69 1196.09 1237.97

If time permits, sweep the following range:
913 – 927.5

Rickettsia felis

(Spotted fever pathogen; carried by fleas)

780.16 1198.63 750.83 819.63 1248.90
862.43 1100.68 1152.59 922.19

Rickettsia helvetica

1240.68 750.83 754.34 772.36 777.67
1373.18 1140.63 895.18 817.68

Rickettsia prowazekii

1042.41 1198.63 751.33 819.93 790.16

Rickettsia rickettsii

921.25 913.64 1198.63 750.83 760.93
814.03 819.93

Rickettsia typhi

707.19 755.34 819.63 736.66 1109.32
862.43 1042.43

Rift Valley fever virus

706.75 1165.00 1339.06 1338.27 720.93
1259.68 709.85 767.64

Ross River Virus

757.62 759.59 760.48 760.61 761.76
763.18 763.37 776.53 1202.45 1215.85
1210.00 1216.34

Rotavirus A

(Primarily infects children)

1370.69 1385.80 842.21 832.91 856.55
846.93 873.41 902.68 958.50 959.31
971.25 972.50 834.44 948.45 1068.46
1187.31 1065.45 1154.60 754.34 1073.53
852.04 949.25 954.05 1017.54

Rothia dentocariosa

914.93 924.70 1198.63 1229.90 1219.29
747.36 730.24 730.95 906.65 865.06

Rubella virus

(Also known as German measles virus; not the same pathogen as measles virus, the causative agent of red measles or rubeola)

927.27 927.37 927.46 927.94 929.08
925.76 712.76 1368.00 1360.39 709.18

Ruminococcus gnavus

1208.87 801.35 783.86 805.91 827.12
781.43

Salmonella enteritidis

(Also known as *Salmoella enterica*, serovar enteritidis; associated with gastroenteritis / food poisoning)

The following numbers should be run exact:

1229.90 734.27 734.74 780.08 779.54
779.00 778.74 778.47 743.68 781.43
772.89 756.35

The following range of frequencies can be used as a sweep:
984-994

Salmonella infantis

(Also known as *Salmoella enterica*, serovar infantis)

1229.90 727.66 728.59 727.89 747.36
752.08 752.58 772.89 756.35 781.43
980.23 980.44

Salmonella typhi & Salmoella paratyphi A

(Also known as *Salmonella enterica*, serovar typhi; and *Salmonella enterica*, serovar paratyphi A; causative agents of typhoid fever)

963.74 967.17 1010.78 1327.76 1359.73
802.57 1240.68 1159.33 1168.91 1188.56
1208.87 1262.84 732.37 732.84 733.79
734.27 734.74 737.62 738.10 752.83
753.08 777.93 778.20 778.47 778.74
779.54 1214.06 1032.39 754.34 756.35

Salmonella typhimurium

(Associated with gastroenteritis / food poisoning)

The following frequencies should be run exact:

734.27 733.79 733.31 732.84 756.10
755.85 752.08 731.89 1188.56 1178.65
1168.91 1229.90 977.22 1198.69 705.43
856.86 770.89 1094.43

The following frequency can be swept plus and minus 3 Hz:

954.13

Sapovirus

1323.01 1310.94 1322.43 1323.59 1324.17
1328.25 1317.23 1312.65 1312.08 1166.50
1173.76 1211.46 1138.33 1131.50 1124.76
1112.00 1145.25 1152.24

The following range of frequencies can be used as a sweep:

1202-1219

Sarcoptes scabiei, type hominis

(Also known as human scabies mite)

1300.67 1302.26 1099.62 866.39 742.94
828.33 729.06 1048.66 858.50 1262.84
1324.95 883.99 753.33 1154.60 783.08
1309.05 912.50

Schistosoma haematobium

(Common name, human blood fluke)

1206.70 1073.53 743.43 734.26 949.25
849.48 1025.84 1079.68 1284.34 1348.63
768.68 894.47 1087.98 714.78 1196.09

Schistosoma indicum and Schistosoma spindale
(Common name for Schistosoma spindale, cattle fluke)

1071.18 1072.52 1077.62 744.41 745.39
731.42 939.79 954.05 850.75 1034.28
1085.90 1293.15 1348.63 768.68 896.60
1113.69 713.43 1211.46

Schistosoma japonicum
(Common name, oriental blood fluke)

1285.34 1128.12 761.44 741.48 930.51
878.50 1014.80 1092.19 1271.35 1324.95
787.96 888.15 1075.57 713.43 1235.27

Schistosoma mansoni
(Common name, human blood fluke)

753.33 1073.53 918.43 1137.76 738.58
954.05 866.39 1034.28 1085.90 1288.73
1348.63 781.43 898.73 1087.98 714.78
1260.03 1255.92

Schistosoma margrebowiei
(A blood fluke endemic in Africa)

1193.65 1058.47 745.39 1268.50 949.25
850.75 1025.84 1061.45 1288.73 1348.63
768.68 894.47 1087.98 713.43 1138.33

Schistosoma mekongi
(Common name, blood fluke)

1286.53 1111.50 799.08 738.58 858.50
870.39 1012.08 1085.90 1275.65 1329.62
781.43 890.25 1075.57 710.74 1227.23

Schistosoma spindale, see Schistosoma indicum

Schistosoma turkestanicum

(Also known as Orientobilharzia turkestanicum)

1226.98	1081.74	744.41	1390.05	968.75
1010.27	1020.29	1104.98	1233.92	1353.47
781.43	896.60	1075.57	721.62	1260.03

Serratia liquefaciens

1229.90	731.89	732.84	733.31	770.52
770.78	771.30	779.27	777.13	748.35

Serratia marcescens

1229.90	1240.68	795.15	795.71	740.03
740.51	734.74	779.54	779.27	779.00
781.42	750.33	1054.24	1393.48	

Serratia plymuthica

1229.90	733.31	733.79	734.27	777.67
777.93	744.41	748.35	777.13	

Shewanella algae

1229.90	730.95	732.37	732.84	733.31
775.80	776.07	776.33	777.40	766.60
785.77	790.16	799.08		

Shewanella oneidensis

932.56 1188.55 738.10 782.51 782.24
799.10 801.35 790.16 785.77

Shigella

(Includes the four species *Shigella boydii*, *S. dysenteriae*, *S. flexneri*, and *S. sonnei*)

1198.63 1219.29 1229.90 1262.84 734.27
734.74 732.37 779.81 779.54 780.08
1194.83 1051.58 844.41 808.22 1113.69
787.96 781.43 752.33

Shingles virus, see Human herpesvirus 3

Simian Parainfluenza Virus 5

1187.46 1307.34 868.38 826.52 1318.00
972.08 1206.94 1329.42

Simian virus 40

1154.60 1079.68 752.33 1069.47 803.63
1034.28 996.04 1197.99 1201.81 1203.73
1205.65 1209.52 1213.41 1059.96 1062.94
1064.44 1065.95 1068.97 1072.01 873.75
875.27 863.24

Simkania negevensis

(A Chlamydia family organism)

928.29 1096.90 1219.29 732.37 767.38
827.12 748.35

Smallpox virus, see Variola virus

Solobacterium moorei

1153.73 1321.85 780.89 748.35 824.71
752.33

Spirometra erinaceieuropaei

(A species of tapeworm)

1326.99 1164.10 776.07 723.01 994.29
881.23 1020.29 1098.55 1271.35 1297.60
819.93 903.04 1087.98 721.62 1211.46

Spiroplasma mirum

1023.00 1023.02 1334.32 996.04 739.54
739.06 792.93 776.33

Sporothrix schenckii

(Fungal organism)

1334.86 762.47 1045.27 1055.51 837.53
704.11 752.33 1398.65 975.43 707.19
1057.48 1362.44 705.43 773.41 1051.58
1143.51 862.43 1262.84 895.18 1181.11
850.75 784.68

Spumaretrovirus, see Huan foamy virus

Stachybotrys chartarum
(Mold organism)

1177.69 1178.73 748.84 729.30 704.11
770.78 1398.65 975.43 734.74 1262.84
968.75 1025.84 1328.64 1331.18 776.60
1051.58 1143.51 949.25 1058.47 836.91
921.42 1075.57 1084.86

Stachybotrys chlorohalonata
(Mold organism)

1154.04 738.58 753.33 1076.60 770.78
1398.65 975.43 734.74 1025.84 1328.84
1331.18 776.60 1051.58 1143.51 944.49
1262.84 968.75

Staphylococcus aureus
(Includes MRSA strains)

1198.63 1229.90 1240.68 1251.66 1262.84
707.19 724.86 727.19 727.655 728.12
728.59 732.84 735.22 773.94 774.21
774.47 774.74 775.00 777.13 785.77
790.16 793.20 798.80 815.20 787.96

Staphylococcus epidermidis

1240.68 1251.66 1262.84 728.59 735.70
730.47 730.00 729.53 799.08 799.37
800.49 774.21 774.74 775.00 775.27
775.53 777.13 787.96 790.16 729.06
744.41 707.19

Staphylococcus intermedius

1240.68 729.53 730.47 774.74 774.21
787.96 736.66 732.84

Staphylococcus haemolyticus

863.06 1240.68 728.59 799.08 738.58
787.96

Staphylococcus lugdunensis

1251.66 1240.68 744.41 727.19 735.70
732.37 741.48 728.59 730.95 775.27
774.74 775.00 775.53 752.83

If time permits, the following frequency ranges can be run as a sweep:
892-894 913-922

Staphylococcus saprophyticus

1208.87 1251.66 729.06 774.47 785.77
920.82

Staphylococcus schleiferi

1240.68 727.66 727.19 772.09 771.83
740.51 734.74 787.96 741.48 773.15
753.58

Staphylococcus warneri

1240.68 727.19 727.66 725.32 774.74
798.52 932.13 955.34

Stenotrophomonas maltophilia

The following frequencies should be run exact:

1240.68 735.22 786.04 958.90 764.53
723.47 773.15 1318.19

The following frequencies can be swept plus and minus 5 hz:

955.37 1013.26

St. Louis encephalitis virus

827.43 879.52

Streptobacillus moniliformis

(Alternate name, *Haverhillia moniliformis*; old names: *Streptothrix muris ratti*, *Nocardia muris*, *Actinobacillus muris ratti*, *Haverhillia multiformis*, *Actinomyces muris*, *Asterococcus muris*, *Proactinomyces muris*)

1309.61 743.43 743.92 745.39 745.88
746.87 778.47 778.74 779.00 779.27
779.54 839.39 854.61

Streptococcus agalactiae

1047.86 1072.70 1089.05 779.81 730.00
751.33 803.63 1219.29 1229.90 1208.87
989.08 758.38

Streptococcus anginosus

1162.32 1195.61 1224.55 1276.38 1229.90
1251.66 787.41 733.31 731.42 781.43
780.62 780.89 780.35 777.13 762.47
766.60 810.53 732.84

Streptococcus constellatus subspecies pharyngitis

1180.04 1229.90 744.41 780.62 780.35
780.08 766.60 732.84

Streptococcus dysgalactiae subspecies equisimilis

1063.26 1073.09 1100.16 1251.66 1229.90
1219.29 918.43 736.66 736.18 734.74
730.47 730.00 728.59 727.66 780.35
780.08 779.81 821.72 821.42

Streptococcus equi subspecies zooepidemicus

1069.24 1077.89 1144.82 1251.66 1229.90
1188.55 734.27 730.95 848.20 846.93
781.16 780.08 781.16 1303.58 1208.87
815.20

Streptococcus gallolyticus

980.98 983.40 985.71 1046.62 1262.84
1251.66 996.04 736.66 781.43 756.35
740.51

Streptococcus gordonii

1054.93 1229.90 749.84 780.62 819.93
1373.19

Streptococcus intermedius

1178.77 1274.22 1251.66 733.31 780.79

Streptococcus milleri

1229.90 725.79 778.47 779.81 772.89
777.13 810.53

Streptococcus mitis

1079.53 1240.68 736.18 775.27 777.13
1334.32 822.314 708.96 732.84

Streptococcus mutans

1141.02 1150.84 802.49 799.93 1188.56
1198.63 1219.29 748.35 729.53 730.35
780.35 780.62 746.38

Streptococcus oralis

1183.10 1240.68 736.18 775.80 705.43
822.31 700.19

Streptococcus parasanguinis

1067.10 1075.00 1095.07 1130.23 1251.66
1240.68 1262.84 1229.90 737.14 739.06
738.10 819.93 818.15 792.37 791.82
781.16 780.62 780.35 781.43 760.42
764.53 736.66

Streptococcus pneumoniae

The following numbers should be run exact:

962.16 1122.52 1149.90 1159.33 1229.90
1240.68 728.59 732.84 744.41 747.86
776.60 789.61 801.35 801.92 779.54
779.81 780.08 780.62 781.43 815.21
819.93 822.31 836.91

The following numbers can be swept plus and minus 3 hz:

1031.93 1043.22 1048.94 1072.42 1114.66
1132.55 1136.71

Streptococcus porcinus

1143.86 1229.90 756.86 779.81 768.68
729.06

Streptococcus pyogenes

The following frequencies should be run exact:

1219.29 1334.32 1208.87 1178.65 1229.90
728.12 729.53 730.00 730.47 1237.97
919.92 777.93 779.01 779.27 779.54
779.81 780.35 780.62 780.89 781.16
789.61 790.16 732.37 848.20 847.57
777.67 822.31 817.56

The following frequency ranges can be run as sweeps:

1st priority: 1219-1223 1258-1262
2nd priority: 1196-1202 1245-1251

Streptococcus salivarius

1088.80 1229.90 734.74 786.59 760.42
721.62 700.19 810.53

Streptococcus sanguinis

970.23 1229.90 730.00 780.617 781.16

Streptococcus sobrinus

1229.90 1240.68 810.53 740.51 770.78
818.45

Streptococcus suis

The following are of primary importance:

777.13 770.78 803.63 808.22 732.84
1251.66 1229.90 1122.52 1113.69 1104.98
989.08 788.50 787.96 737.14 736.66
735.70 733.31 729.53 780.35 780.08
779.81 779.54 779.27 779.00

The following are of secondary importance:

1105 - 1106 1136.8 – 1142.2 1061.5 – 1064.2
1079.7 – 1084.2 1154.34 1169.84 778.20
780.62 1208.87 1198.63 1017.54 982.21

Streptococcus vestibularis

1188.18 1229.90 731.42 732.37 780.62
770.78 729.06 810.53

Strongyloides fuelleborni

1298.34 1189.80 769.73 720.70 803.63
737.62 1025.84 949.25 1293.15 1320.31
844.41 920.67 1208.87 714.33 1285.80

Strongyloides stercoralis

(Common name, threadworm)

1315.89 782.51 1192.31 1281.43 918.43
924.43 1294.63 1042.86 821.12 1303.58
734.27 1214.06 716.14 918.43 737.62
957.28 1358.35 844.41 841.89

Succinivibrio dextrinosolvens

1229.90 752.33 752.83 753.83 789.61
789.88 790.16 790.43 791.26 781.43
752.33 785.77

Taenia crassiceps

(Common name, tapeworm; most common in canids)

1340.74 1179.88 784.68 701.49 968.75
878.50 1054.52 1104.98 1267.08 1288.73
815.20 903.04 1087.98 721.62 1251.66

Taenia general

(includes *Taenia asiatica*, *Taenia multiceps*, & *Taenia saginata*; common name for these species, beef tapeworm)

1321.18 1322.14 1324.36 1159.33 1161.71
1165.30 768.68 773.94 775.00 1397.78
1395.20 978.81 983.92 878.50 1060.45
1098.55 1269.93 1267.08 1242.05 1284.34
815.20 903.04 1087.98 721.62 720.24
1251.66

Taenia hydatigena

(Common names: tapeworm, thin-necked bladderworm; alternate names: *Cysticercus tenuicollis*, *Cysticercus tenuicollis*)

1341.84 1165.30 776.07 1397.78 973.76
878.50 1060.45 1098.55 1267.08 1288.73
815.20 903.04 1087.98 721.62 1251.66

Taenia saginata

(Common name, beef tapeworm)

1324.36	1397.78	983.92	878.50	1060.45
1098.55	1242.05	1284.34	815.20	903.04
1087.98	721.62	1251.66	1165.30	773.94

Taenia serialis

(Common name, canid tapeworm)

1322.62	1395.20	978.81	878.50	1060.45
1098.55	1267.08	1284.34	815.20	903.04
1087.98	720.24	1251.66	1156.96	772.89

Taenia solium

(Common name, pork tapeworm)

929.75	1320.60	1155.78	803.63	1262.84
1071.50	721.62	1087.99	934.36	1284.34
1269.93	815.21	1251.66	878.50	1060.45
1098.55	1397.78	973.76		

Taenia taeniaeformis

(Alternate or old names: Hydatigera taeniaeformis, Taenia crassicollis, Cysticercus fasciolaris [larval form], Hydatigera himalayotaenia)

1326.60	1181.11	790.16	702.36	973.76
878.50	1081.74	1092.19	1267.08	1271.35
834.44	905.20	1087.98	721.62	1265.66

Tannerella forsythensis (forsythia)

(Old name, Bacteroides forsythus)

1360.92	1285.80	800.50	800.21	780.35
883.99				

Thelazia callipaeda

(Common name, Oriental eyeworm)

1324.56 1324.66 1324.75 1172.54 850.75
1374.85 803.63 723.47 1045.75 973.76
1258.63 1315.70 844.41 918.43 1198.63
710.74 1235.27

Tick-borne encephalitis virus

(Also known as FSME virus [“Fruhsommer Meningoenzephalitis Virus”],
or “Early summer meningoencephalitis virus”)

883.64 883.90 815.57 817.86 824.11
828.41 830.92 831.84 832.14 832.37
835.44 835.68 836.91 841.42 841.58

Toxocara canis and Toxocara cati

(Common names, dog roundworm and cat roundworm; *Toxocara cati* is
sometimes called *Toxacara felis*)

1264.07 1290.47 1182.34 1186.06 812.86
814.03 717.50 793.48 796.83 737.62
1025.84 947.66 1296.11 1340.64 1342.24
844.41 920.67 1219.29 1224.57 715.69
1306.59 1303.58

Toxocara malaysiensis

(Common name, feline roundworm; can also infect dogs)

1269.04 1186.06 814.03 716.14 796.83
737.62 1023.06 947.66 1297.60 1342.24
844.41 920.67 1224.57 715.69 1303.58

Toxoplasma gondii

The following frequencies should be run exact:

1034.64 1140.63 1149.90 1302.08 1267.79
754.84 704.548 842.52 1100.15 1023.06

The following frequencies can be swept plus and minus 3 Hz:

1204.54 1220.54 1151.13 1184.47 1006.12
937.68 892.71 734.08 1287.17 1338.80
724.07 1249.39 1399.83 1344.47

Treponema denticola

1285.80 746.87 777.93 808.22 870.39

Treponema pallidum

1018.14 1016.85 831.99 757.37 780.35

Treponema vincentii

(Formerly known as *Borrelia vincentii*)

1240.68 1251.66 717.96 736.18 759.91
764.01 824.71 812.86

Trichinella spiralis

1083.69 823.51 1196.09 1274.22 727.19
916.20 1258.63 1154.60 808.22 1203.73
1363.26 1131.50 731.89 732.84 835.68
1014.80

Trichobilharzia regenti

(A species of schistosome parasite)

1220.11	1114.78	773.79	737.14	954.05
870.39	1023.06	1098.55	1293.15	1373.18
781.43	903.04	1087.98	708.08	1235.27

Trichomonas vaginalis

1208.87	818.45	906.65	878.50	718.87
1156.96				

Trichophyton

(Includes *Trichophyton rubrum* and *Trichophyton mentagrophytes*; fungal organisms)

1341.79	745.12	818.45	1011.17	1075.57
821.12	1014.80	1077.62	800.78	796.83
713.43	712.53	1396.92	927.46	737.62
1051.58	1335.90	700.19	773.41	1154.00
935.13	968.75	740.51	1333.53	

Trichophyton schoenleinii

(Fungal organism)

746.25	794.60	821.12	713.43	712.53
1398.65	932.05	737.62	1051.58	1333.53
700.19	773.41	1051.58	1154.01	935.13
968.75	740.51			

Trichophyton violaceum
(Fungal organism)

744.53 794.04 804.48 713.43 712.53
1398.65 927.46 737.62 1051.58 1335.90
700.19 773.41 1154.01 935.13 968.75
740.51

Trichosporon asahii
(Fungal organism)

1111.80 1111.77 780.35 743.43 1393.48
999.56 737.62 1262.84 744.41 783.05
1126.44 930.51 748.84 793.48 771.83
892.35 1123.64 1352.66

Trichosporon inkin
(Fungal organism)

917.45 760.42 841.58 950.84 918.43
714.78 743.43 1393.48 967.92 737.62
1140.63 744.41 710.74 783.05 1063.44
1126.44 930.51

Trichostrongylus
(Includes the species *Trichostrongylus axei* and *Trichostrongylus vitrinus*;
Common name, stomach/intestinal hairworm [roundworm, nematode])

1326.01 1311.89 1181.11 809.37 717.50
817.56 739.55 736.66 1017.54 949.25
944.49 1311.13 1339.06 844.41 922.92
1214.06 715.69 1303.58

Trichuris trichiura

(Common name, human whipworm)

1288.91 1120.30 811.70 732.37 839.40
731.89 1023.06 1368.20 1258.63 1279.98
829.55 934.36 1100.69 731.42 1188.56
862.43

Tropheryma whipplei

1249.49 1251.34 1188.55 741.97 742.46
729.77 730.00 768.68 772.89 949.25
808.22

Trueperella pyogenes

1219.29 737.14 737.62 738.10 738.58
739.06 726.95 727.19 727.42 727.66
728.12 728.36 729.30 729.53 750.33
805.91

Trypanosoma brucei, strain gambiense

The following frequencies should be run exact:

1198.63 908.84 846.93 1285.80 707.19
841.89 1048.66 905.20 863.74

The following frequencies can be swept plus and minus 3 Hz:

783.01 1292.98 788.29 809.09 836.13
978.56 1041.75 1041.11 1072.70 1188.59
1022.74

Trypanosoma cruzi

1297.60 1321.85 1017.54 1274.22 1260.03
1144.67 1199.90 976.28 928.99 1372.35
900.88 1047.69 1202.45 862.43 756.35
844.41 1075.57 707.63

Ureaplasma parvum

The following frequencies should be run exact:

1373.18 1386.65 1297.60 1285.80 739.55
772.36 757.37 779.81 780.08 707.19
1373.18 895.18 881.23

If time permits, the following frequencies can be swept plus and minus 2 Hz:

768.67 770.67 772.48 749.48

Ureaplasma urealyticum

The following frequencies should be run exact:

1373.18 741.48 742.46 780.08 780.62
1359.98 822.31 770.78 878.50 1366.55

If time permits, the following frequencies can be swept plus and minus 3 Hz:

1306.67 1310.63 1313.93 1324.97 1331.74
1368.61 1371.98 1386.93 1223.29 1286.73

Varicella zoster virus, see Human herpesvirus 3

Variola virus

(Common name, smallpox virus)

Run the following frequency range:

769.00 – 787.00

Veillonella parvula

1240.68 1229.90 1219.29 730.00 729.53
721.62 721.16 769.73 771.83 769.21
771.57 831.99 829.55 827.12 808.22

Venezuelan Equine Encephalitis Virus

785.09 787.54 789.54 790.99 791.68
792.65 794.67 797.96 800.29 1201.49
1202.45 1210.00 802.63 806.06 1156.37
1156.96

Vibrio parahaemolyticus

1229.90 1188.55 1240.68 1219.29 1178.65
724.86 725.32 726.25 754.84 769.73
783.05 782.24 776.33 776.60 776.07
777.40 776.87 768.68 772.89 1318.77

Vibrio vulnificus

1229.90 1219.29 733.79 734.27 783.86
784.13 784.40 772.89 775.00 1282.88
768.68 1140.63 1184.05 1227.23 1075.06
1237.29 799.65 861.77 1073.82 858.50

Waddlia chondrophila

(A chlamydia family organism)

1094.98 1161.04 1251.66 734.74 769.99

West Nile virus

820.75	878.75	818.67	819.34	820.08
821.79	821.87	823.06	824.49	825.01
825.76	833.06	834.90	836.45	837.30
839.01	842.76	847.73	878.50	879.52

Western equine encephalitis virus

788.23	786.59	1222.75	1219.95
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Wolbachia endosymbiont strain TRS of Brugia malayi

1072.75	1140.63	747.36	809.37
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Wolbachia endosymbiont of Onchocerca volvulus

1206.16	1334.32	752.83	811.70	878.50
819.93	857.20			

Wolbachia endosymbiont of Wuchereria bancrofti

1092.20	1092.52	1334.32	753.33	809.37
878.50	812.86	846.93		

Wuchereria bancrofti

1327.67	1159.33	839.39	1374.85	810.53
726.25	1041.90	973.76	1254.44	1342.24
841.89	920.67	1168.91	709.41	1251.66

Xenotropic MuLV-related virus

(Also known as XMRV; MuLV = murine leukemia virus)

1105.93 870.22 702.80 1168.31 1379.88
839.08 779.54

Yellow fever virus

833.37 836.37 841.27 884.42 884.16

Yersinia enterocolitica

760.42 759.91 759.40 762.47 766.60
756.10 755.85 752.83 752.58 752.33
751.83 1188.55 1229.90 903.76 906.65
1173.76 1178.65 1193.57 1198.63 707.19
742.46 772.89

Zika virus

881.32 882.35

If time permits, sweep the following range of frequencies: 835-875

Special Sets

Cancer cell metabolics

(Related to the altered sugar metabolism associated with some types of cancer cells)

These 14 numbers should ideally be run in the order given.
It may be helpful to run this set twice, in rapid succession. If time is lacking to run the whole set again, run the 3 starred items a second time.

* 925.19 * 780.35 709.41 867.72 740.51
903.04 1123.64 1034.28 961.35 1350.24
* 822.02 1209.52 1116.98 912.50

Cancer factors common

(Related to a selection of common cancer growth factors and oncoproteins)

916.20 705.87 1183.43 784.68 783.31
1211.46 869.72 1267.08 993.42 1045.75
963.80 1103.10 994.29 810.53 1211.46
1306.59 890.95 780.35 789.61 1065.95
1241.36 778.75 777.93 965.45 913.98
1249.25 1331.96 1257.23 916.20

Inflammation & Pain

(Related to many factors that can cause inflammation and subsequent pain)

First priority:

1131.50 1227.23 1034.28 1398.65 761.44
1247.52 1084.86 1126.00 948.45 946.07
886.76 807.06 1235.27 998.68 727.19
1307.72 1045.75 778.74 837.53 780.35
946.07 1065.95 1257.93 1137.19

Second priority:

946.87 916.94 1060.45 1006.68 970.42
1063.44 1072.52 925.19 898.38 881.92
716.14

Lyme-related Inflammation & pain

(Similar to the Inflammation & pain set listed above, but more specific for factors often found associated with lyme disease)

886.76 946.07 1131.50 1398.65 807.06
1138.33 1045.75 1084.86 943.71 1126.00
778.74 803.06 789.61 1247.52 1257.93

Animal Pathogens

Actinomyces bovis

1219.29 737.14 738.10 713.88 714.56
714.78 715.01 764.53 746.37

Aelurostrongylus abstrusus

(Common name, cat/feline lungworm)

1301.23 1177.42 812.86 717.50 817.56
733.79 1025.84 944.49 1306.59 1324.95
836.91 920.67 1198.63 706.75 1331.18

Anaplasma marginale

1240.68 750.83 809.95 810.24 854.61
900.88 857.20

Anaplasma phagocytophilum

787.52 721.62 790.16 812.57 975.44
989.08

Ancylostoma caninum

(Common name, dog hookworm)

1319.83 1176.20 816.38 717.50 814.03
739.55 1017.54 944.49 1297.60 1339.06
844.41 920.67 1214.06 718.42 1303.58

Angiostrongylus vasorum

(Common name, French heatworm)

1348.84	1177.42	812.86	718.87	810.53
734.74	1020.29	944.49	1288.73	1339.06
844.41	925.19	1219.29	722.54	1321.85

Anoplocephala perfoliata & Anoplocephala magna

(Common name, horse tapeworm)

1252.10	1315.80	1154.60	1164.10	782.51
710.74	712.09	983.92	881.23	879.86
1028.64	1098.55	1271.35	1293.15	815.20
907.38	1087.98	716.14	1235.27	

Ascaris suum

(Also known as *Ascaris lumbricoides*; common name, pig roundworm)

1267.44	808.22	1179.88	717.96	810.53
737.62	1031.45	944.49	1297.60	1342.24
844.41	920.67	1214.06	714.33	1303.58

Avian erythroblastosis virus

768.89	918.43	928.99	939.01	975.44
977.96	1188.56	1201.49	1230.90	1247.52
1382.41	1387.50	1395.20	929.75	1068.97
1199.90	1246.15			

Avian Leucosis Virus

1242.39	802.16	788.84	1053.39	1023.27
1383.24	971.12	934.28	837.47	737.18
829.84	1179.88	706.93	792.97	

Avian myelocytomatosis virus

1334.32 1343.43 861.44

Babesia bigemina

764.01 789.61 886.76 1037.13 892.35
949.25 1285.80 982.21 1010.27 1024.91
873.07 895.18 1327.28 1337.48

Babesia bovis

1031.36 1031.37 753.71 824.71 1037.13
947.66 939.79 1285.80 1039.99 1055.51
873.07 1339.94 893.57 781.43

Babesia divergens

1235.69 781.43 827.12 895.18 1309.61
1311.13 1312.65 1354.28

Babesia gibsoni

771.70 771.44 875.78 927.46 1285.80
873.07 792.93 882.61 994.29 1037.13
1057.48

Bartonella alsatica

1384.38 1240.68 756.35 803.34 803.05
727.19

Bartonella birtlesii

The following frequencies should be run exact:

721.62 883.99 794.60 1240.68 755.85
802.20 1251.66 825.31 825.92 766.08
805.63 805.05

If time allows, the following frequency ranges can be swept:

1247-1264 1287-1292

Bartonella bovis

713.17 714.94 1229.90 756.86 803.05
725.32 796.83 883.99 1240.68 758.89
804.48 767.12 805.63

Bartonella capreoli

1277.03 1229.90 760.93 805.34 727.19
801.35 796.83

Bartonella doshiae

725.32 794.60 883.99 1240.68 1251.66
756.86 767.12 827.12 802.49 805.34
805.91 1312.89 1288.97

Bartonella henselae

1251.66 1240.68 758.89 766.60 767.12
804.48 805.63 878.50 796.83 727.19
756.35

Bartonella melophagi

762.87 1229.90 758.38 800.50 729.06

Bartonella schoenbuchensis

1379.46 727.19 1240.68 1229.90 756.86
756.35 803.34 804.77 767.12 766.60
805.91 807.35

Bartonella vinsonii

1240.68 1251.66 760.93 767.12 786.86
819.93 804.48 805.05 799.08 723.47
883.99 1285.47 1296.09 1145.88 1285.61
1321.95

Baylisascaris procyonis

(Common name, raccoon roundworm)

1224.82 1174.98 809.37 717.50 810.53
737.62 1023.06 944.49 1297.60 1342.24
844.41 920.67 1214.06 714.33 1303.58

Beak and Feather Disease Virus

1297.60 1302.08 1306.59 752.33 755.34
758.38 761.44 764.53 767.64 927.46
1193.57

The following frequency range can be used as a sweep:

1121-1141

Bordetella bronchiseptica

868.04 1240.68 739.06 785.49 732.84

Borrelia burgdorferi

(Also known as Borreliella burgdorferi [synonym]).

Primary numbers:

736.18 736.66 739.06 771.57 775.53
1274.22 1285.80 1297.60 1055.51 1124.76

Secondary numbers:

783.59 819.93 714.33 985.63 1365.80
713.43 737.14 737.62 932.05 838.77
1374.85 831.38 895.18 890.95

Bovine leukemia virus

731.42 1217.98 1203.73 1138.33 958.09
960.53 1064.69 1318.00 939.79 884.68
1038.08 1038.79 1054.40 1054.03

Bovine papillomavirus types 1 & 2

1139.34 1140.49 1369.86 738.58 1245.46
1247.52 1229.90 1262.84 916.20 781.43
836.91 985.63 1055.51 803.05 806.49
760.93 757.87

Bovine papillomavirus type 14

1136.33 1145.25 918.43 1225.23 911.77
1055.51 792.93 714.78

Brachyspira pilosicoli

1229.90 1219.29 739.06 1379.88 1390.48
751.08 757.87 801.97 837.95 895.95
906.78

Brucella abortus

996.95 1001.48 1090.89 1092.38 1188.56
1198.63 778.20 778.74 778.47 805.63
805.92 1347.03 862.43 783.59

Brucella canis

1100.36 960.11 1198.63 762.47 949.25
861.77 824.11 1347.03 664.03 1331.18

Brucella melitensis

1092.38 1094.55 983.76 1001.48 1188.56
1198.63 778.20 778.74 790.71 775.80
776.33 778.47 805.06 805.63 1347.03
862.43 783.59

Brucella ovis

1097.54 995.22 1159.33 778.74 772.36
862.43 1343.83

Brucella suis

1099.41 1204.58 959.65 827.12 1131.50
1198.63 759.40 778.74 762.47 778.45
805.92 861.77 949.25 824.11 1347.03
906.65 1328.06 968.75 1331.18 889.55

Burkholderia pseudomallei

(Formerly known as Pseudomonas pseudomallei).

1251.66 739.55 739.06 738.58 737.62
783.32 783.05 782.51 782.24 781.43
1376.53 766.60

Canine adenovirus type 2

1155.96 810.53 1111.50 848.20 909.57
844.41 1311.51 1235.27 970.42 1328.84
789.61 1092.19 879.86 1353.47 755.34
832.91 912.50 829.55 1093.77 839.39
1390.05

Canine Distemper Virus

1153.86 720.24 742.94 1247.52 1079.68
1123.64 1138.33 1241.36 1381.15 1153.86

Canine parvovirus

1128.12 1138.33 1036.65 1103.55 1290.20
1043.82

Chlamydia muridarum

1079.88 1206.78 1229.90 1240.68 942.92
729.53 730.95 731.42 769.73 769.99
1350.24 839.39

Chlamydophila abortus

1012.48 1219.29 731.42 768.42

Chlamydophila caviae

987.45 1136.33 1198.63 730.95 769.21
767.38 1337.48 854.61

Chlamydophila felis

(Formerly known as *Chlamydophila psittaci* feline pneumonitis agent)

993.50 1188.56 731.42 768.42 1198.63

Chlamydophila pecorum

1047.43 1274.22 735.70 771.57

Chlamydophila psittaci

988.45 988.46 988.59 988.90 990.84
995.35 1198.47 1251.66 1274.22 1240.68
735.22 736.18 770.78 771.30 1343.83

Corynebacterium equi, see *Rhodococcus equi*

Dicrocoelium dendriticum & chinensis

(Common names, Lancet liver fluke or Small liver fluke)

1213.65 1216.34 1170.12 1168.91 801.35
800.22 737.14 908.11 870.39 1014.80
1104.98 1258.63 1297.60 812.86 943.71
1075.57 727.19 1235.27

Dipylidium caninum

(Common names: flea tapeworm, dog tapeworm, cat tapeworm)

1266.37 1167.70 777.13 1299.09 983.92
875.78 1045.75 1098.55 1267.08 822.31
907.38 1087.98 723.01 1243.41

Dirofilaria immitis

(Common name, dog heartworm)

1310.56 1170.12 824.71 1374.85 812.86
726.25 1047.69 983.92 1261.43 1324.95
841.89 920.67 1168.91 709.41 1251.66

Dirofilaria repens

(A filarial nematode parasite)

1323.88 1179.88 861.11 1374.85 812.86
726.25 1047.69 983.92 1291.67 1324.95
841.89 920.67 1198.63 710.74 1227.23

Eastern Equine Encephalitis Virus

773.41 774.87 774.94 775.00 775.34
776.27 780.08 781.29 1209.52 1210.00
1216.34 1219.29 1220.77 803.05 1214.06
1215.04

Echinostoma hortense
(A trematode parasite)

1207.42 1164.10 746.37 734.27 944.49
899.45 1054.52 1098.55 1258.63 1302.08
794.60 907.38 985.63 720.24 1260.03

Ehrlichia canis

881.09 1188.555 762.47 808.795 946.07
989.08

Ehrlichia chaffeensis

985.05 707.19 873.07 750.33 816.68
989.08 955.66

Eimeria

(Includes *Eimeria tenella*, *E. praecox*, *E. necatrix*, *E. maxima*, *E. brunetti*,
and *E. acervulina*)

728.36 728.48 732.48 733.08 733.67
736.18 1040.94 1041.90 1042.86 1043.82
1046.72 1025.84 1090.08 1092.19 1096.42
1100.68 1107.15 1048.66 767.12 768.68
726.25 723.47

Eimeria stiedai

721.05 784.68 749.34 1048.66

Encephalitozoon cuniculi

1379.48 1326.74 1372.70 1278.45 1154.03
1216.33 1314.90 1198.63 1208.87 873.07
871.06 915.46 910.30 1321.85 707.19
1082.82 1102.24 744.87 733.60

Equine papillomavirus type 1

1189.49 1189.02 1331.18 955.66 1215.36
922.92 750.33 792.93 791.26 745.88

Equine Papillomavirus type 2

1160.22 916.94 801.35 848.20 905.20
725.79 754.84

Escherichia coli

1262.84 1188.56 1178.65 1159.33 1149.90
734.74 734.27 733.79 731.89 731.42
730.00 728.59 728.12 726.72 723.01
780.08 779.81 779.54 779.27 779.00
778.74 778.47 778.20 777.13 776.87
775.80 1251.66 1032.39 1243.41 750.33

Fasciola hepatica

(Common names: sheep liver fluke; common liver fluke)

1251.84 1147.57 739.54 881.23 738.58
939.79 1017.54 1039.99 890.25 1306.59
1254.44 794.60 1251.66 721.62 1092.19

Feline (felid) herpesvirus 1, see Feline rhinotracheitis virus

Feline Calicivirus

1177.88 1178.19 1178.50 854.93 855.42
855.90 1126.44 1128.12 1128.68 883.99

Feline immunodeficiency virus

815.20 836.91 1315.70 749.34 810.53
928.22 929.37 882.61 892.35 883.99
1198.63

Feline Infectious Peritonitis Virus

1233.46 899.45 1038.55 1315.70 770.78
1140.63 717.96 998.68 927.46 912.50

Feline leukemia virus

1071.50 1072.52 1173.76 844.41 845.35

Feline Panleukopenia Virus

908.29 1128.12 1036.65

Feline papillomavirus types 1-5

Felis domesticus papillomavirus type 1

1090.61 1359.98 985.63 1241.36 988.21 844.41 740.03 712.09

Feline papillomavirus type 2

1145.97 1359.98 985.63 1251.66 710.74 751.83 747.36

Felis catus papillomavirus type 3

1193.73 1369.86 965.45 1260.03 853.97 1145.25 866.39 734.27
751.83

Felis catus papillomavirus type 4

1188.55 1369.86 927.46 1239.33 848.20 973.76 734.27 737.14

Felis catus papillomavirus type 5

1191.06 1340.64 955.66 1266.37 811.70 777.13 762.47
757.87

Feline herpesvirus type 1 (feline rhinotracheitis virus)

(Also known as Feline [felid] herpesvirus 1)

The following frequencies should be run exact:

756.35 1078.65 1127.00 795.15 705.43
859.81

The following number frequency can be swept plus and minus 3 Hz:

1066.54

Francisella tularensis

740.03 740.51 742.94 743.43 766.86
783.32 784.68 789.88 790.71 790.99
1159.33 1198.63 1219.29 1240.68 1251.66
978.81 1220.62 1222.30 1223.58 1224.34
1225.51

Giardia lamblia

(Also known as Giardia intestinalis)

The following frequencies should be run exact:

1246.15 1245.46 982.21 781.43 1306.59
1188.56 1125.88 944.49 1113.69 867.72

The following frequencies can be swept plus and minus 10 hertz:

827.6 858.27 1363.13

Haemobartonella felis, see *Mycoplasma haemofelis*

Haemonchus contortus

(Common names, red stomach worm, and barber pole worm)

1288.09	1189.80	805.91	715.24	817.56
736.66	1017.54	944.49	1297.60	1339.06
844.41	920.67	1224.57	715.69	1285.80

Hendra virus

992.87	708.08	1065.95	824.71	1131.50
1069.47	1379.88	1247.52	1344.23	841.89

Japanese Encephalitis Virus

824.71	824.64	825.16	825.24	825.31
825.54	825.61	825.69	879.01	

Louping ill virus

832.68	883.64
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Macracanthorhynchus hirudinaceus

(Common name: Giant thorny-headed worm of swine)

1267.61	1202.45	895.18	741.48	839.39
737.62	1009.37	958.90	1271.35	1250.28
852.04	890.25	1063.44	1379.88	1303.58

Metagonimus yokogawai
(Fluke parasite)

1186.53	1162.90	743.43	735.70	843.15
850.75	1004.00	1098.55	1246.15	1293.15
794.60	881.92	1075.57	720.24	1227.23

Metastrongylus

(Includes the species *Metastrongylus salmi* & *Metastrongylus pudentotectus*; common name, pig lungworm)

1313.98	1312.55	1181.11	809.37	718.87
814.03	734.74	1017.54	1014.80	949.25
939.79	1271.35	1225.90	1328.06	1332.75
829.55	920.67	927.46	1214.06	1183.58
714.78	713.43	1294.63		

Microsporium Canis

(Fungal organism)

756.13	1008.02	1087.98	818.15	801.35
713.43	709.85	1396.92	965.45	737.62
1051.58	1335.90	700.19	773.41	1152.24
935.13	968.75	988.21	740.51	

Microsporium ferrugineum & Microsporium audouinii

(Common name, ringworm; fungal organism)

755.72	749.06	795.15	818.15	713.43
709.85	1398.65	965.45	740.51	1051.58
1335.90	700.19	773.41	1152.24	935.13
968.75				

Mycobacterium avium subspecies hominissus, see **Mycobacterium hominissus**

Mycobacterium avium subspecies paratuberculosis, see **Mycobacterium paratuberculosis**

Mycobacterium bovis

1059.46 1066.54 1240.68 736.66 721.39
924.43 933.58

Mycobacterium hominissus
(Also known as **Mycobacterium avium subspecies hominissus**)

770.78 719.79 1262.84 733.31 734.74
736.66 724.86 726.95 728.12

Mycobacterium paratuberculosis
(Also known as **Mycobacterium avium subspecies paratuberculosis**)

959.60 1240.68 733.31 727.89 831.99
772.89

Mycoplasma alvi

1378.31 1359.98 737.62 777.13 778.47
750.33 701.93

Mycoplasma haemofelis
(Formerly called **Haemobartonella felis**)

1251.66 792.37 819.34 730.95 1009.94

Mycoplasma hyorhinis

1347.03 741.00 737.14 782.24 781.97
782.51 762.47 1359.64 1396.47

Sweep the following range in ½ Hz steps:
1373 – 1384.5

Mycoplasma mycoides

1285.80 1309.61 741.48 741.97 742.46
742.94 776.87 777.13 781.97 782.24
778.47 803.63 822.31 824.71 834.44
1379.88 1383.26

Nematodirus spathiger

1339.16 1182.34 815.20 718.42 814.03
739.55 1018.46 944.49 1306.59 1350.24
867.72 920.67 1240.68 715.69 1294.63

Neospora caninum

The following frequencies should be run exact:
1264.96 1295.37 1293.52 900.88

The following frequencies can be swept plus and minus 3 Hz:
1012.63 1214.32 1067.82 1083.00 1000.00
847.05 1379.09 1174.00 941.24 1378.71
844.06 1326.93 762.05 715.89

Newcastle Disease Virus

1191.68 1192.16 1191.21 770.25 953.25
1034.28 1362.44 1319.54 1368.62

Nippostrongylus brasiliensis
(Roundworm of rodents)

1355.60	1189.80	755.34	718.87	814.03
739.55	1019.37	944.49	1305.08	1348.63
844.41	929.75	1219.29	715.69	1303.58

Opisthorchis felinus
(Common name, cat liver fluke)

1267.88	1139.48	726.25	1254.44	1302.08
794.60	886.06	705.43	1227.23	1075.57
724.39	958.90	877.14	1014.80	1098.55

Orientobilharzia turkestanicum, see *Schistosoma turkestanicum*

Ostertagia circumcincta, see *Teladorsagia circumcincta*

Parachlamydia acanthamoebae

754.24	1219.29	730.00	746.13	768.68
783.59	1277.09			

Rabies virus

758.60	758.80	759.00	759.20	795.15
1142.93	704.55	1398.21	761.57	762.66
763.05				

Rhipicephalus sanguineus
(Common name, brown dog tick)

1230.73 1230.40 951.64 824.71 735.70
838.15 733.79 1051.58 850.75 1202.45
822.31 869.72 1028.64 1366.55 1260.03
895.12

Rhodococcus equi
(Formerly known as *Corynebacterium equi*)

1219.29 1229.90 739.06 738.58 751.33
722.08 721.85 810.53 898.35

Rickettsia africae

907.54 819.93 753.83

Rickettsia felis
(Spotted fever pathogen; carried by fleas)

780.16 1198.63 750.83 819.63 1248.90
862.43 1100.68 1152.59 922.19

Rift Valley fever virus

706.75 1165.00 1339.06 1338.27 720.93
1259.68 709.85 767.64

Salmonella enteritidis

(Also known as Salmoella enterica, serovar enteritidis; associated with gastroenteritis / food poisoning)

The following numbers should be run exact:

1229.90 734.27 734.74 780.08 779.54
779.00 778.74 778.47 743.68 781.43
772.89 756.35

The following range of frequencies can be used as a sweep:
984-994

Salmonella typhimurium

(Associated with gastroenteritis / food poisoning)

The following frequencies should be run exact:

734.27 733.79 733.31 732.84 756.10
755.85 752.08 731.89 1188.56 1178.65
1168.91 1229.90 977.22 1198.69 705.43
856.86 770.89 1094.43

The following frequency can be swept plus and minus 3 Hz:
954.13

Sarcocystis neurona

1379.46 1255.13 906.65 900.88 1310.37
1250.97 1373.60 1244.78

Sarcoptes scabiei, type canis

(Canine scabies mite)

1324.66 1119.19 978.81 730.00 737.62
723.47 1081.74 850.75 1348.63 1221.93
787.96 1113.69 792.92 900.88 895.18

Schistosoma indicum and Schistosoma spindale
(Common name for Schistosoma spindale, cattle fluke)

1071.18 1072.52 1077.62 744.41 745.39
731.42 939.79 954.05 850.75 1034.28
1085.90 1293.15 1348.63 768.68 896.60
1113.69 713.43 1211.46

Schistosoma spindale, see Schistosoma indicum

Schistosoma turkestanicum
(Also known as Orientobilharzia turkestanicum)

1226.98 1081.74 744.41 1390.05 968.75
1010.27 1020.29 1104.98 1233.92 1353.47
781.43 896.60 1075.57 721.62 1260.03

Spirometra erinaceieuropaei
(A species of tapeworm)

1326.99 1164.10 776.07 723.01 994.29
881.23 1020.29 1098.55 1271.35 1297.60
819.93 903.04 1087.98 721.62 1211.46

Staphylococcus felis

934.62 1240.68 730.00 773.68 785.77
746.37 740.51

Staphylococcus pseudintermedius

1240.68 728.12 728.59 772.36 775.80
799.08 799.37 736.66 1092.19 723.47
732.84

Staphylococcus schleiferi

1240.68 727.66 727.19 772.09 771.83
740.51 734.74 787.96 741.48 773.15
753.58

Streptococcus Equi subspecies equi

1028.19 1297.60 1229.90 730.95 780.08
1198.63 1145.25 819.93 762.47

Streptococcus gallolyticus

980.98 983.40 985.71 1046.62 1262.84
1251.66 996.04 736.66 781.43 756.35
740.51

Streptococcus suis

The following are of primary importance:

777.13 770.78 803.63 808.22 732.84
1251.66 1229.90 1122.52 1113.69 1104.98
989.08 788.50 787.96 737.14 736.66
735.70 733.31 729.53 780.35 780.08
779.81 779.54 779.27 779.00

The following are of secondary importance:

1105 - 1106 1136.8 – 1142.2 1061.5 – 1064.2
1079.7 – 1084.2 1154.34 1169.84 778.20
780.62 1208.87 1198.63 1017.54 982.21

Strongyloides stercoralis
(Common name, threadworm)

1315.89	782.51	1192.31	1281.43	918.43
924.43	1294.63	1042.86	821.12	1303.58
734.27	1214.06	716.14	918.43	737.62
957.28	1358.35	844.41	841.89	

Strongyloides fuelleborni

1298.34	1189.80	769.73	720.70	803.63
737.62	1025.84	949.25	1293.15	1320.31
844.41	920.67	1208.87	714.33	1285.80

Strongylus vulgaris
(Common name, bloodworm; infects horses)

1265.93	1181.11	809.37	717.50	814.03
739.55	1014.80	939.79	1293.15	1339.06
844.41	920.67	1214.06	714.78	1303.58

Taenia crassiceps
(Common name, tapeworm; most common in canids)

1340.74	1179.88	784.68	701.49	968.75
878.50	1054.52	1104.98	1267.08	1288.73
815.20	903.04	1087.98	721.62	1251.66

Taenia general

(Includes *Taenia asiatica*, *Taenia multiceps*, & *Taenia saginata*; common name for these species, beef tapeworm)

1321.18 1322.14 1324.36 1159.33 1161.71
1165.30 768.68 773.94 775.00 1397.78
1395.20 978.81 983.92 878.50 1060.45
1098.55 1269.93 1267.08 1242.05 1284.34
815.20 903.04 1087.98 721.62 720.24
1251.66

Taenia pisiformis

(Common name, rabbit tapeworm)

1352.36 1167.70 778.20 1397.78 968.75
879.86 1060.45 1111.50 1262.84 1293.15
817.56 903.04 1087.98 723.01 1251.66

Taenia saginata

(Common name, beef tapeworm)

1324.36 1397.78 983.92 878.50 1060.45
1098.55 1242.05 1284.34 815.20 903.04
1087.98 721.62 1251.66 1165.30 773.94

Taenia serialis

(Common name, canid tapeworm)

1322.62 1395.20 978.81 878.50 1060.45
1098.55 1267.08 1284.34 815.20 903.04
1087.98 720.24 1251.66 1156.96 772.89

Taenia solium

(Common name, pork tapeworm)

929.75	1320.60	1155.78	803.63	1262.84
1071.50	721.62	1087.99	934.36	1284.34
1269.93	815.21	1251.66	878.50	1060.45
1098.55	1397.78	973.76		

Teladorsagia circumcincta

(Also known as Ostertagia circumcincta; common names: sheep/goat nematode, brown stomach worm)

1287.08	1181.11	809.37	717.50	814.03
736.66	1019.37	944.49	1297.60	1348.63
844.41	934.36	1224.57	717.05	1294.63

Theileria parva

767.77	914.83	942.92	1285.80	946.07
750.83	815.50	752.33	831.99	1013.44
1300.58	1159.33	779.81	737.62	975.43

Thelazia callipaeda

(Common name, Oriental eyeworm)

1324.56	1324.66	1324.75	1172.54	850.75
1374.85	803.63	723.47	1045.75	973.76
1258.63	1315.70	844.41	918.43	1198.63
710.74	1235.27			

Toxocara canis and Toxocara cati

(Common names, dog roundworm and cat roundworm; *Toxocara cati* is sometimes called *Toxacara felis*)

1264.07 1290.47 1182.34 1186.06 812.86
814.03 717.50 793.48 796.83 737.62
1025.84 947.66 1296.11 1340.64 1342.24
844.41 920.67 1219.29 1224.57 715.69
1306.59 1303.58

Toxocara malaysiensis

(Common name, feline roundworm; can also infect dogs)

1269.04 1186.06 814.03 716.14 796.83
737.62 1023.06 947.66 1297.60 1342.24
844.41 920.67 1224.57 715.69 1303.58

Toxoplasma gondii

The following frequencies should be run exact:

1034.64 1140.63 1149.90 1302.08 1267.79
754.84 704.548 842.52 1100.15 1023.06

The following frequencies can be swept plus and minus 3 Hz:

1204.54 1220.54 1151.13 1184.47 1006.12
937.68 892.71 734.08 1287.17 1338.80
724.07 1249.39 1399.83 1344.47

Trichinella spiralis

1083.69 823.51 1196.09 1274.22 727.19
916.20 1258.63 1154.60 808.22 1203.73
1363.26 1131.50 731.89 732.84 835.68
1014.80

Trichostrongylus

(Includes the species *Trichostrongylus axei* and *Trichostrongylus vitrinus*;
Common name, stomach/intestinal hairworm [roundworm, nematode])

1326.01 1311.89 1181.11 809.37 717.50
817.56 739.55 736.66 1017.54 949.25
944.49 1311.13 1339.06 844.41 922.92
1214.06 715.69 1303.58

Trichuris ovis & Trichuris discolor

(Common name, whipworms of sheep and goats [*T. ovis* and *T. discolor*];
whipworm of cows [*T. discolor*])

1298.15 1302.08 1145.25 1146.41 846.93
854.61 732.84 828.33 729.06 733.79
1017.54 1373.18 1368.20 1258.63 1254.44
829.55 918.43 920.67 1100.68 727.19
1219.29 1211.46 831.99

Varroa destructor

(Common name, bee mite)

1098.81 985.63 780.35 732.84 838.15
726.25 1025.84 836.91 1206.29 1198.63
875.78 869.72 1087.98 1326.50 1294.63
721.62

Venezuelan Equine Encephalitis Virus

785.09 787.54 789.54 790.99 791.68
792.65 794.67 797.96 800.29 1201.49
1202.45 1210.00 802.63 806.06 1156.37
1156.96

Waddlia chondrophila
(A chlamydia family organism)

1094.98 1161.04 1251.66 734.74 769.99

West Nile virus

820.75 878.75 818.67 819.34 820.08
821.79 821.87 823.06 824.49 825.01
825.76 833.06 834.90 836.45 837.30
839.01 842.76 847.73 878.50 879.52

Western equine encephalitis virus

788.23 786.59 1222.75 1219.95

Wolbachia endosymbiont strain TRS of Brugia malayi

1072.75 1140.63 747.36 809.37

Wolbachia endosymbiont of Onchocerca volvulus

1206.16 1334.32 752.83 811.70 878.50
819.93 857.20

Wolbachia endosymbiont of Wuchereria bancrofti

1092.20 1092.52 1334.32 753.33 809.37
878.50 812.86 846.93

Wuchereria bancrofti

1327.67 1159.33 839.39 1374.85 810.53
726.25 1041.90 973.76 1254.44 1342.24
841.89 920.67 1168.91 709.41 1251.66

Xenotropic MuLV-related virus

(Also known as XMRV; MuLV = murine leukemia virus)

1105.93 870.22 702.80 1168.31 1379.88
839.08 779.54

Yellow fever virus

833.37 836.37 841.27 884.42 884.16

Yersinia enterocolitica

760.42 759.91 759.40 762.47 766.60
756.10 755.85 752.83 752.58 752.33
751.83 1188.55 1229.90 903.76 906.65
1173.76 1178.65 1193.57 1198.63 707.19
742.46 772.89

Zika virus

881.32 882.35

If time permits, sweep the following range of frequencies:
835-875