VIOME

NICHOLAS PERRY'S RESULTS

VIOME

Dear Nicholas Perry,

Jim Fuller

Technical Director

VIOME

Test Name:	**Test Name:**
Stool test	Blood test
Authorized Order Person:	**Authorized Order Person:**
Nicholas Perry	Nicholas Perry
Customer Name:	**Customer Name:**
Nicholas Perry	Nicholas Perry
DOB:	**DOB:**
05/01/1987	05/01/1987
Gender:	**Gender:**
Male	Male
Customer Id:	**Customer Id:**
510dfe4f	510dfe4f
Sample Source:	**Sample Source:**
Fecal	Blood
Date Collected:	**Date Collected:**
01/06/2023	01/06/2023
Date Received:	**Date Received:**
01/11/2023	01/10/2023
Date Issued:	**Date Issued:**
01/21/2023	01/21/2023
Sample ID:	**Sample ID:**
1DAJKWVRHJF1	2VJANE1

Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Meet your probiotic microbes

These are microbes that are found in commercially available probiotic products that are also active in your sample. If there are no organisms listed, no probiotics were identified in your sample.

Bifidobacterium bifidum PRL2010

P   Probiotic

Bifidobacterium breve 689b

P   Probiotic

Bifidobacterium breve JCM 7019

P   Probiotic

Bifidobacterium longum DJO10A

P   Probiotic

Bifidobacterium longum NCC2705

P   Probiotic

Bifidobacterium longum subsp. infantis

P   Probiotic

Bifidobacterium longum subsp. infantis 157F

P   Probiotic

Bifidobacterium longum subsp. longum

P   Probiotic

Bifidobacterium longum subsp. longum BBMN68

P   Probiotic

Bifidobacterium longum subsp. longum GT15

P   Probiotic

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Bifidobacterium longum subsp. longum JCM 1217

P Probiotic

Bifidobacterium longum subsp. longum JDM301

P Probiotic

Bifidobacterium longum subsp. longum KACC 91563

P Probiotic

Bifidobacterium longum subsp. suillum

P Probiotic

Enterococcus durans

P Probiotic

Enterococcus faecium ATCC 8459 = NRRL B-2354
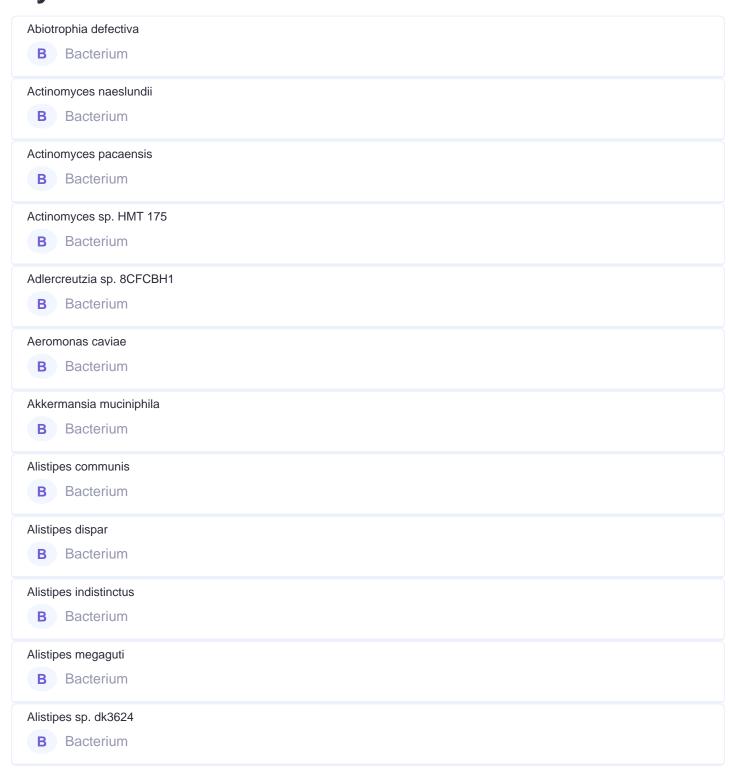
P Probiotic

Pediococcus acidilactici

P Probiotic

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My Active Gut Microbes

Abiotrophia defectiva

B Bacterium

Actinomyces naeslundii

B Bacterium

Actinomyces pacaensis

B Bacterium

Actinomyces sp. HMT 175

B Bacterium

Adlercreutzia sp. 8CFCBH1

B Bacterium

Aeromonas caviae

B Bacterium

Akkermansia muciniphila

B Bacterium

Alistipes communis

B Bacterium

Alistipes dispar

B Bacterium

Alistipes indistinctus

B Bacterium

Alistipes megaguti

B Bacterium

Alistipes sp. dk3624

B Bacterium

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Amedibacterium intestinale

B Bacterium

Anaerobutyricum hallii

B Bacterium

Anaerococcus vaginalis

B Bacterium

Anaerostipes hadrus

B Bacterium

Arachnia propionica F0230a

B Bacterium

Aspergillus flavus

E Eukaryote

Atlantibacter hermannii

B Bacterium

Bacteroides caccae

B Bacterium

Bacteroides caecimuris

B Bacterium

Bacteroides cellulosilyticus

B Bacterium

Bacteroides dorei CL03T12C01

B Bacterium

Bacteroides fragilis 638R

B Bacterium

Bacteroides fragilis YCH46

B Bacterium

Test Name: Gut Intelligence Test, Human Gene Expression Test

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Bacteroides intestinalis

B Bacterium

Bacteroides ovatus V975

B Bacterium

Bacteroides sp. A1C1

B Bacterium

Bacteroides sp. CACC 737

B Bacterium

Bacteroides sp. CBA7301

B Bacterium

Bacteroides sp. HF-162

B Bacterium

Bacteroides sp. HF-5141

B Bacterium

Bacteroides sp. HF-5287

B Bacterium

Bacteroides sp. PHL 2737

B Bacterium

Bacteroides thetaiotaomicron VPI-5482

B Bacterium

Bacteroides uniformis

B Bacterium

Bacteroides vulgatus ATCC 8482

B Bacterium

Bacteroides xylanisolvens

B Bacterium

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Bacteroides zoogleoformans

B Bacterium

Bifidobacterium adolescentis ATCC 15703

B Bacterium

Bifidobacterium angulatum

B Bacterium

Bifidobacterium bifidum PRL2010

B Bacterium **P** Probiotic

Bifidobacterium breve 689b

B Bacterium **P** Probiotic

Bifidobacterium breve JCM 7019

B Bacterium **P** Probiotic

Bifidobacterium catenulatum DSM 16992 = JCM 1194 = LMG 11043

B Bacterium

Bifidobacterium catenulatum subsp. kashiwanohense

B Bacterium

Bifidobacterium catenulatum subsp. kashiwanohense JCM 15439 = DSM 21854

B Bacterium

Bifidobacterium longum DJO10A

B Bacterium **P** Probiotic

Bifidobacterium longum NCC2705

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. infantis

B Bacterium **P** Probiotic

Test Name: Gut Intelligence Test, Human Gene Expression Test

Customer Name: Nicholas Perry

DOB: 05/01/1987

Bifidobacterium longum subsp. infantis 157F

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum BBMN68

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum GT15

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum JCM 1217

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum JDM301

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. longum KACC 91563

B Bacterium **P** Probiotic

Bifidobacterium longum subsp. suillum

B Bacterium **P** Probiotic

Bifidobacterium pseudocatenulatum DSM 20438 = JCM 1200 = LMG 10505

B Bacterium

Blautia argi

B Bacterium

Blautia producta ATCC 27340 = DSM 2950

B Bacterium

Blautia sp. LZLJ-3

B Bacterium

Test Name: Gut Intelligence Test, Human Gene Expression Test

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DOB: 05/01/1987

Blautia sp. SC05B48

B Bacterium

Butyricimonas faecalis

B Bacterium

Butyricimonas virosa

B Bacterium

Christensenella minuta

B Bacterium

Christensenella sp. Marseille-P3954

B Bacterium

Clostridioides difficile

B Bacterium

Clostridium perfringens

B Bacterium

Collinsella aerofaciens ATCC 25986

B Bacterium

Coprobacter sp. 2CBH44

B Bacterium

Coprococcus comes

B Bacterium

Corynebacterium segmentosum

B Bacterium

Desulfovibrio piger

B Bacterium

Dysosmobacter welbionis

B Bacterium

Test Name: Gut Intelligence Test, Human Gene Expression Test

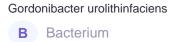**Customer Name:** Nicholas Perry

DOB: 05/01/1987

Enterobacter hormaechei

B Bacterium

Enterobacter roggenkampii

B Bacterium

Enterocloster bolteae

B Bacterium

Enterococcus avium

B Bacterium

Enterococcus casseliflavus

B Bacterium

Enterococcus cecorum

B Bacterium

Enterococcus durans

B Bacterium **P** Probiotic

Enterococcus faecalis

B Bacterium

Enterococcus faecium ATCC 8459 = NRRL B-2354

B Bacterium **P** Probiotic

Enterococcus lactis

B Bacterium

Enterococcus saigonensis

B Bacterium

Enterococcus sp. DA9

B Bacterium

Enterococcus sp. M190262

B Bacterium

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Erysipelatoclostridium ramosum

B Bacterium

Escherichia fergusonii

B Bacterium

Eubacterium callanderi

B Bacterium

Eubacterium maltosivorans

B Bacterium

Eubacterium sp. NSJ-61

B Bacterium

Faecalibacillus intestinalis

B Bacterium

Faecalibacterium prausnitzii A2-165

B Bacterium

Flavonifractor plautii

B Bacterium

Flintibacter sp. KGMB00164

B Bacterium

Gemella morbillorum

B Bacterium

Gemella sanguinis

B Bacterium

Gordonibacter urolithinfaciens

B Bacterium

Intestinimonas butyriciproducens

B Bacterium

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Lachnoclostridium phocaeense

B   Bacterium

Lachnoclostridium sp. YL32

B   Bacterium

Lacticaseibacillus paracasei subsp. paracasei

B   Bacterium

Lacticaseibacillus paracasei subsp. paracasei JCM 8130

B   Bacterium

Lacticaseibacillus paracasei subsp. tolerans

B   Bacterium

Lacticaseibacillus rhamnosus

B   Bacterium

Lactobacillus curvatus JCM 1096 = DSM 20019

B   Bacterium

Lactobacillus delbrueckii subsp. sunkii

B   Bacterium

Lactobacillus paracasei ATCC 334

B   Bacterium

Lactobacillus paracasei N1115

B   Bacterium

Lactobacillus paragasseri

B   Bacterium

Lactobacillus plantarum 16

B   Bacterium

Lactobacillus sakei subsp. sakei 23K

B   Bacterium

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Lactobacillus sakei subsp. sakei DSM 20017 = JCM 1157

B Bacterium

Lactococcus cremoris

B Bacterium

Lactococcus garvieae

B Bacterium

Lactococcus phage 28201

V Virus

Lactococcus phage 936

V Virus

Lactococcus phage LP8511

V Virus

Lactococcus virus P008

V Virus

Leuconostoc citreum

B Bacterium

Leuconostoc garlicum

B Bacterium

Ligilactobacillus agilis

B Bacterium

Ligilactobacillus animalis

B Bacterium

Loigolactobacillus backii

B Bacterium

Longibaculum sp. KGMB06250

B Bacterium

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Massilistercora timonensis

B   Bacterium

Megamonas funiformis

B   Bacterium

Megamonas hypermegale

B   Bacterium

Mobiluncus curtisii ATCC 43063

B   Bacterium

Mogibacterium diversum

B   Bacterium

Odoribacter splanchnicus DSM 20712

B   Bacterium

Oscillibacter sp. PEA192

B   Bacterium

Paprika mild mottle virus

V   Virus

Parabacteroides distasonis ATCC 8503

B   Bacterium

Parabacteroides goldsteinii

B   Bacterium

Parabacteroides phage YZ-2015b

V   Virus

Parabacteroides sp. CT06

B   Bacterium

Pediococcus acidilactici

B   Bacterium   **P**   Probiotic

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Pediococcus damnosus

B Bacterium

Pediococcus inopinatus

B Bacterium

Pediococcus pentosaceus

B Bacterium

Pepper mild mottle virus

V Virus

Phaseolus vulgaris alphaendornavirus 1

V Virus

Phocaeicola coprophilus

B Bacterium

Prevotella enoeca

B Bacterium

Propionibacterium freudenreichii

B Bacterium

Pyrenophora tritici-repentis

E Eukaryote

Roseburia hominis A2-183

B Bacterium

Rothia dentocariosa

B Bacterium

Ruminococcus bicirculans

B Bacterium

Ruthenibacterium lactatiformans

B Bacterium

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Schaalia odontolytica

B Bacterium

Secundilactobacillus paracollinoides

B Bacterium

Staphylococcus schleiferi

B Bacterium

Streptococcus agalactiae

B Bacterium

Streptococcus anginosus

B Bacterium

Streptococcus australis

B Bacterium

Streptococcus constellatus subsp. pharyngis C232

B Bacterium

Streptococcus constellatus subsp. pharyngis C818

B Bacterium

Streptococcus equinus

B Bacterium

Streptococcus gallolyticus

B Bacterium

Streptococcus infantarius subsp. infantarius CJ18

B Bacterium

Streptococcus intermedius B196

B Bacterium

Streptococcus intermedius C270

B Bacterium

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Streptococcus intermedius JTH08

B Bacterium

Streptococcus koreensis

B Bacterium

Streptococcus mitis

B Bacterium

Streptococcus oralis

B Bacterium

Streptococcus pasteurianus

B Bacterium

Streptococcus periodonticum

B Bacterium

Streptococcus salivarius CCHSS3

B Bacterium

Streptococcus salivarius JIM8777

B Bacterium

Streptococcus sanguinis SK36

B Bacterium

Streptococcus sp. A12

B Bacterium

Streptococcus sp. CNU 77-61

B Bacterium

Streptococcus sp. CNU G3

B Bacterium

Streptococcus sp. FDAARGOS_192

B Bacterium

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Streptococcus sp. I-G2

B Bacterium

Streptococcus sp. oral taxon 061

B Bacterium

Streptococcus sp. oral taxon 431

B Bacterium

Streptococcus suis SC070731

B Bacterium

Streptococcus thermophilus JIM 8232

B Bacterium

Streptococcus thermophilus LMD-9

B Bacterium

Streptococcus thermophilus MN-ZLW-002

B Bacterium

Streptococcus thermophilus ND03

B Bacterium

Streptococcus vestibularis

B Bacterium

Streptococcus viridans

B Bacterium

Sutterella wadsworthensis

B Bacterium

Tobacco mild green mosaic virus

V Virus

Treponema sp. RCC2812

B Bacterium

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Turicibacter sanguinis

B Bacterium

Turicibacter sp. H121

B Bacterium

Weissella cibaria

B Bacterium

Weissella confusa

B Bacterium

Weissella hellenica

B Bacterium

[Clostridium] innocuum

B Bacterium

[Clostridium] scindens ATCC 35704

B Bacterium

[Ruminococcus] gnavus ATCC 29149

B Bacterium

https://www.viome.com/reportablerange

Viome Methodology

Microbial total RNA is extracted, ribosomal RNA molecules are removed from total RNA, and the remaining RNA molecules are sequenced on Illumina NextSeq or NovaSeq. Proprietary bioinformatics algorithms are used to perform taxonomic classification and functional analysis of the sequencing data.

Whole blood total RNA is extracted, polyadenylated transcripts are captured from total RNA and sequenced on Illumina NextSeq or NovaSeq. Proprietary bioinformatics algorithms are used to perform quantitative gene expression analysis of the sequencing data. Results are reported to Viome customers in the context of integrative functional health themes communicated as scores derived largely from proprietary pathway content and analytics methodology. Each score is built to account for molecular pathway topology and strength of literature evidence manually curated by translational science experts in systems biology. Scoring results are CLIA-validated and are end-to-end automated in the production system, which uses each customer's gene expression data as input.

Method Limitation

Viome's results and recommendations are based on our ability to identify and quantify thousands of microbial taxa . Such vast diversity has not been captured in the genomic databases, so it is impossible to assess it comprehensively. There are microorganisms that thrive in the gut whose genomes have not been sequenced. Viome is unable to identify those specific organisms, but can identify their near neighbors, which have similar homology. There are also taxa that we cannot discriminate because of their sequence similarity, for example at the strain level. There are some RNA transcripts that may not always align and match to specific known organisms, which may be due to the fact that these sequences are poorly characterized, reliable consensus sequence may not be available for reference. Viome monitors the growth of public genomic databases and will update its own databases when there is sufficient new information to be worthy of incorporation.

Detection of a microorganism by this test does not imply having a disease. Similarly, not detecting a microorganism by this test does not exclude the presence of a disease-causing microorganism. Further, other organisms may be present that are not detected by this test. This test is not a substitute for established methods for identifying microorganisms or their antimicrobial susceptibility profile. Results are qualitative and identify the presence or absence of identified annotated organisms.

Viome's results and recommendations are based on our ability to identify and quantify thousands of human transcripts. While the test has been clinically validated and shows very high precision, it also has some limitations. As the presence of transcripts nears the limits of detection, the ability of the test to accurately detect them is diminished. This is simply due to the uneven distribution of molecules in liquid volumes, causing small random changes in the transcript concentrations. Scores rely on detection of expressed genes, as well as their levels of expression against the reference population cohort. Hence, certain sample results may be affected by any skewing or sampling biases of the reference cohort, as opposed to solely the biology of the given customer. Scores also are limited by our current understanding of actionable or biologically

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meaningful insights and literature coverage to date. As Viome's reference population expands and current knowledge grows, these limitations become more negligible.

The Gut Intelligence Test was developed by, and its performance characteristics determined by Viome Inc. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This laboratory is registered under CLIA (50D2224932) to perform high complexity testing. Sequencing was performed at Viome Inc. CLIA (50D2224932). Contact Viome for any further questions.

The Human Gene Expression test was developed by, and its performance characteristics determined by Viome Inc. It has not been cleared or approved by the US Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. This laboratory is registered under CLIA 50D2224932 to perform high complexity testing. Sequencing was performed at Viome, Inc. CLIA 50D2224932. Contact Viome for any further questions.

VIOME

These results are signed off by...

Jim Fuller

Technical Director