

26060-0001

Dr Test Doctor

Lab ID

Patient ID P029036

Ext ID 26060-0001

Test Patient

Sex: Female • 16yrs • 01-Jan-10

123 Test Street, Burwood Victoria 3125

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PaediatricBiome GutIQ, Ages 3-17

Specimen type - Stool

Collected

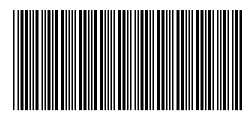
15-Feb-26

MACROSCOPIC EXAMINATION		OCCULT BLOOD	
TEST	RESULT	TEST	INTERPRETATION
Stool Colour	Brown	Occult Blood	Negative
Stool Form	Semiformed		
Mucous	Absent		

GIT FUNCTIONAL MARKERS					
TEST	RESULT	H/L		REFERENCE	UNITS
Calprotectin	<5.0			(<100.0)	ug/g
b-Glucuronidase	3033			(100-8000)	U/g
Pancreatic Elastase 1	370			(>200)	ug/g
pH	7.1			(5.5-7.5)	
Secretory IgA	1374			(200-1400)	ng/mL
Steatocrit	2.0			(<15.0)	%
Transglutaminase IgA	1.0			(<100.0)	ug/g
Zonulin	54			(<150)	ng/mL

Short Chain Fatty Acids					
Test	Result	H/L		Reference	Units
Short Chain Fatty Acids, Beneficial	73.5			(>13.0)	umol/g
Acetate	68.30			(45.00-72.00)	%
Butyrate	10.80			(9.00-33.00)	%
Propionate	18.90			(0.00-30.00)	%
Valerate	2.00			(0.70-5.50)	%

Important Biochemical Functions										
Test	Result	H/L						Reference	Units	
Ammonia/Urease Production	0.2110								<0.5000	%
Histamine Production	0.0990								<1.0000	%
Lipopolysaccharides (LPS) Production	1.0157								<6.5000	%
Sulphate Production	0.4050								<3.0000	%



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Practitioner Summary – Early Life Gut Microbiome Development

This report interprets results using a developmentally informed framework, recognising that there is no single “normal” infant microbiome. Instead, findings are contextualised against expected microbial trajectories associated with different delivery and feeding types, with emphasis on functional capacity and maturation trends rather than isolated taxonomic findings.

Vaginal Delivery

Progressive reduction in Proteobacteria over time

Slower transition from facultative to obligate anaerobes

These patterns are considered developmental variants rather than pathological, particularly within the first year of life. Interpretation focuses on trajectory and functional development.

Reduced inflammatory signalling and enhanced gut barrier support

Earlier establishment of adult-like microbial functions

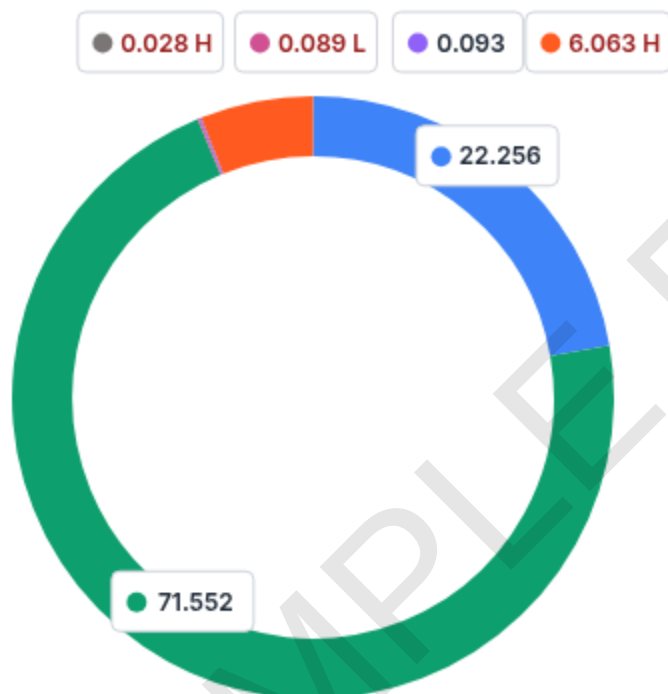
The gut microbiome in infants, children, and adolescents is continuously developing and may vary considerably due to factors such as age, mode of delivery, diet, antibiotic exposure, illness, and environmental influences. Results are therefore interpreted using age-specific reference ranges developed for infant or paediatric patients aged 0-3 years or 0-17 years respectively.

This test provides supportive information about gut microbial composition and should be interpreted alongside clinical history, symptoms, diet, and other relevant investigations. The presence or absence of specific organisms does not necessarily indicate disease.

This report is not intended to diagnose medical conditions or replace medical advice. Results should be reviewed and interpreted by a qualified healthcare practitioner within the context of the patient's clinical presentation.

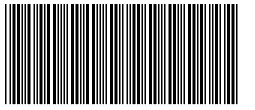
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TEST	RESULT	H/L		REFERENCE	UNITS
Actinobacteria Phylum	0.089	L		(0.100-15.000)	%
Bacteroidetes Phylum	22.256			(22.000-58.000)	%
Euryarchaeota Phylum	0.028	H		(<0.020)	%
Firmicutes Phylum	71.552			(35.000-70.000)	%
Proteobacteria Phylum	6.063	H		(0.200-8.500)	%
Verrucomicrobia Phylum	0.093			(0.050-4.000)	%



TEST	RESULT	H/L		REFERENCE	UNITS
Shannon Diversity Index	4.51	H		(2.00-4.20)	
Simpson Diversity Index	0.97			(0.75-0.98)	

TEST	RESULT	H/L		REFERENCE	UNITS
Firmicutes/Bacteroidetes ratio	3.21			(<3.80)	ratio
Fus. nucleatum/Faec. prausnitzii ratio	N/A			(<2.50)	ratio
Gram-Positive/Gram-Negative ratio	0.16			(<2.30)	ratio
Prevotella/Bacteroides ratio	N/A			(<0.70)	ratio
Proteobacteria/Actinobacteria	67.87	H		(<16.00)	ratio



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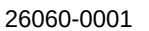
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PARASITES					
TEST	RESULT	H/L		REFERENCE	UNITS
Blastocystis hominis	941.00	H		(<1.00)	x10^5 org/g
Cryptosporidium species	<DL			(<1.00)	x10^5 org/g
Cyclospora cayetanensis	<DL			(<1.00)	x10^5 org/g
Dientamoeba fragilis	<DL			(<1.00)	x10^5 org/g
Entamoeba histolytica	<DL			(<1.00)	x10^5 org/g
Enterocytozoon species	<DL			(<1.00)	x10^5 org/g
Giardia intestinalis	<DL			(<1.00)	x10^5 org/g
Blastocystis Subtypes					
TEST	RESULT				
Subtype 1	Negative				
Subtype 2	POSITIVE				
Subtype 3	Negative				
Subtype 4	Negative				
Subtype 5	Negative				
Subtype 6	Negative				
Subtype 7	Negative				
Subtype 8	Negative				
Subtype 9	Negative				
HELMINTHS			VIRUSES		
TEST	RESULT		TEST	RESULT	
Ancylostoma species Hookworm	Not Detected		Adenovirus 40/41	Not Detected	
Ascaris species, Roundworm	Not Detected		Astrovirus (hAstro)	Not Detected	
Enterobius vermicularis, Pinworm	Not Detected		Norovirus GI/II	Not Detected	
Hymenolepis spp, Tapeworm	Not Detected		Rotavirus A	Not Detected	
Necator americanus, Hookworm	Not Detected		Sapovirus (I,II,IV,V)	Not Detected	
Strongyloides spp, Roundworm	Not Detected				
Taenia species, Tapeworm	Not Detected				
Trichuris trichiura, Whipworm	Not Detected				

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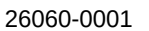
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TEST	RESULT	H/L	REFERENCE	UNITS
Abiotrophia defectiva	<DL		(<0.010)	%
Acinetobacter baumannii	<DL		(<0.010)	%
Acinetobacter haemolyticus	<DL		(<0.010)	%
Acinetobacter junii	<DL		(<0.010)	%
Bacteroides caccae	0.470		(<4.000)	%
Bacteroides fragilis	<DL		(<9.000)	%
Phocaeicola vulgatus	0.431		(<12.000)	%
Bilophila wadsworthia	0.068		(<0.400)	%
Citrobacter freundii	<DL		(<0.100)	%
Citrobacter koseri	<DL			%
Citrobacter youngae	<DL			%
Corynebacterium urealyticum	<DL		(<0.010)	%
Desulfovibrio piger	<DL		(<0.120)	%
Enterobacter cloacae	<DL		(<0.080)	%
Enterococcus casseliflavus	0.002		(<0.010)	%
Enterococcus faecalis	<DL		(<6.000)	%
Enterococcus faecium	<DL		(<0.010)	%



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● Actinobacteria Phylum ● Bacteroidetes Phylum ● Euryarchaeota Phylum ● Firmicutes Phylum ● Proteobacteria Phylum ● Verrucomicrobia Phylum



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SEMI-FORMED STOOL:

FAECAL OCCULT BLOOD NEGATIVE:

FAECAL TRANSGLUTAMINASE IgA: Negative

Tissue Transglutaminase is the most specific test for Coeliac Disease. Levels less than 100 are considered NEGATIVE.

Treatment:

No treatment required. However, If there is clinical suspicion of Coeliac disease consider testing serum Coeliac markers. Also assess IgG/IgA Food sensitivity tests to identify specific food intolerances.

ACCREDITATION SCOPE: Please note that the above test is currently not under the laboratory's scope of accreditation.

ACTINOBACTERIA LOW:

Phylum: Actinomycetota (Actinobacteria)

Age group: 3–17 years

What this represents at this age:

In older children, Actinobacteria still commonly reflect bifidobacteria, but they are typically less dominant than in infancy as Firmicutes and Bacteroidetes expand with diet diversity. Low Actinobacteria may indicate reduced fibre/prebiotic intake, higher ultra-processed dietary pattern, recent antibiotics, or reduced saccharolytic fermentation capacity.

Clinical interpretation note:

More relevant when paired with symptoms (bloating, constipation, IBS-like features) and broader patterns such as low diversity, low butyrate producers, or elevated Proteobacteria/inflammatory markers. In isolation, low is not diagnostic.

Suggestions:

- Review dietary fibre diversity and quality
- Correlate with antibiotics and GI symptom timeline
- Interpret alongside diversity indices and butyrate-producer status

EURYARCHAEOTA ELEVATED:

Phylum: Euryarchaeota (Archaea)

Age group: 3–17 years

What this represents at this age:

Elevated methanogenic archaea can reflect increased methane production potential. Methane is often associated with slower gut motility and constipation-predominant patterns in some individuals, although association strength varies and is not diagnostic.

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More clinically relevant if constipation, hard stools, or slow transit features are present. Interpret in context and alongside other microbiome and inflammatory markers.

- Correlate with stool frequency/form and constipation history
- Interpret longitudinally to confirm persistence
- Consider broader dietary and motility assessment in symptomatic children

What this represents at this age:

Clinical interpretation note:

Consider as a key imbalance marker, especially if paired with low butyrate producers (e.g., *Faecalibacterium*) and/or elevated inflammatory markers.

- Correlate with symptoms, antibiotic/infection history, and inflammatory markers
- Interpret with butyrate-producer profile and diversity
- Consider longitudinal follow-up to confirm persistence

What this represents at this age:

Broad and evenly distributed microbial community.

Clinical significance:

Often favourable, but still non-diagnostic.

Clinical interpretation note:

Interpret with overall balance of commensals vs opportunists.

Suggestions:

No action required in isolation

PROTEOBACTERIA / ACTINOBACTERIA RATIO ELEVATED (Proteobacteria-predominant):

Marker type: Phylum balance ratio

Age group: 3–17 years

What this represents at this age:

More consistent with Proteobacteria expansion and reduced anaerobic resilience.



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Suggestions:
Review diet only if markedly dominant or symptoms are present

STREPTOCOCCUS TOTAL ELEVATED:
Phylum: Bacillota (Firmicutes)
Age group: 3–17 years
What this represents at this age:
Higher total streptococcal signal in stool typically reflects oral-source contribution, dietary exposures, or reduced anaerobic resilience.
Clinical significance:
Supportive marker of a facultative-dominant pattern when paired with reduced diversity and symptoms.
Clinical interpretation note:
Not diagnostic in isolation; interpret in context.
Suggestions:
-Review oral health, antibiotics, and symptoms
-Consider follow-up if persistent and clinically relevant

Parasites/Worms Comment
BLASTOCYSTIS HOMINIS ELEVATED:
Organism Type: Anaerobic protozoan
Age group: 3–17 years
What this represents at this age:
Often acquired through travel, contaminated food/water, or environmental exposure. May coexist with altered microbial diversity.
Clinical significance:
In adolescents, certain strains have been associated with bloating, altered bowel habits, and low-grade inflammatory responses. Clinical impact is strain and host-dependent.
Clinical interpretation note:
Assess symptom burden, inflammatory markers, and overall microbiome balance before initiating treatment.
Suggestions:
-Treat if persistent GI symptoms present
-Optimise microbiome diversity
-Support gut barrier function if required

Methodology
Automated Chemistry/Immunochemistry, Chemiluminescence Immunoassay (CLIA), Enzyme-Linked Immunosorbent Assay (ELISA), Microscopy, Fluorescence Enzyme Immunoassay (FEIA), pH Electrode, Gas Chromatography-MS (GC/MS), Metagenomic Next Generation Sequencing (mNGS), Quantitative PCR (qPCR), Polymerase Chain Reaction (PCR)