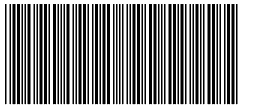


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NATA Accreditation No. 20770. The current scope of accreditation is available on the NATA website.



25283-0010

Dr Test Doctor (Test Doctor) Test Clinic. 123 Test Street, Test Suburb Victoria 3125

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WORMS/HELMINTHS		WORMS/HELMINTHS	
TEST	RESULT	TEST	RESULT
Ancylostoma species Hookworm	Not Detected	Necator americanus, Hookworm	Not Detected
Ascaris species, Roundworm	DETECTED	Strongyloides spp, Roundworm	Not Detected
Enterobius vermicularis, Pinworm	Not Detected	Taenia species, Tapeworm	Not Detected
Hymenolepis spp, Tapeworm	Not Detected	Trichuris trichiura, Whipworm	Not Detected

BENEFICIAL BACTERIA				
TEST	RESULT	H/L	REFERENCE	UNITS
Bifidobacterium animalis	2+		(<4+)	
Bifidobacterium bifidum	1+		(<4+)	
Bifidobacterium breve	NEG		(<4+)	
Bifidobacterium longum	NEG		(<4+)	
Bifid. pseudocatenuatum	1+		(<4+)	
Escherichia coli	2+		(NEG-4+)	
Lactobacillus acidophilus	1+		(<4+)	
Lactobacillus casei	2+		(<4+)	
Lactobacillus paracasei	NEG		(<4+)	
Lactobacillus plantarum	1+		(<4+)	
Lactobacillus rhamnosus	2+		(<4+)	

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

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BACTERIAL CULTURE

Organism	Growth	H/L	Ref Range	Classification
 Aeromonas hydrophila	1+	H	(<1+)	PATHOGEN
 Citrobacter freundii complex	4+	H	(<4+)	Possible Pathogen
 Enterococcus faecalis	1+		(<4+)	Non-Pathogen
 Enterococcus faecium	1+		(<4+)	Non-Pathogen
 Klebsiella oxytoca	3+		(<4+)	Non-Pathogen
 Pseudomonas aeruginosa	2+		(<4+)	Non-Pathogen
 Streptococcus agalactiae	1+		(<4+)	Non-Pathogen

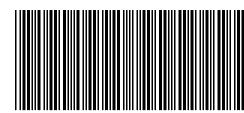
Actinobacteria Phylum Bacteroidetes Phylum Euryarchaeota Phylum Firmicutes Phylum Proteobacteria Phylum Verrucomicrobia Phylum

SUSCEPTIBILITY - BACTERIA

Antimicrobials	<i>Aeromonas hydrophila</i> Susceptible	<i>Citrobacter freundii</i> complex Susceptible	<i>Klebsiella oxytoca</i> Susceptible	<i>Pseudomonas aeruginosa</i> Susceptible
Ampicillin	R	S	S	NT
Augmentin	S	R	S	NT
Ciprofloxacin	S	S	S	R
Gentamicin	S	S	S	NT
Meropenem	S	S	S	S
Norfloxacin	S	S	S	NT
Trimethoprim/Sulpha	S	S	S	NT

R Resistant **S** Susceptible **I** Intermediate **NT** Not Tested

Disclaimer: The antibiotics listed have been reported as requested by the treating healthcare practitioner. Clinical necessity for antibiotic use may vary, and prescription should be based on the professional judgment of the healthcare practitioner and patient case. Information regarding natural inhibitors is provided for reference purposes only and is not intended to replace medical advice or treatment.



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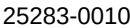
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NATURAL SUBSTANCES - BACTERIA		
Citrobacter freundii complex	Low Inhibition	High Inhibition
	Berberine	
	Black Walnut	
	Caprylic Acid	
	Citrus Seed (GSE)	
	Coptis	
	Garlic	
	Golden Seal	
	Oregano	
Klebsiella oxytoca	Low Inhibition	High Inhibition
	Berberine	
	Black Walnut	
	Caprylic Acid	
	Citrus Seed (GSE)	
	Coptis	
	Garlic	
	Golden Seal	
	Oregano	
Streptococcus agalactiae	Low Inhibition	High Inhibition
	Berberine	
	Black Walnut	
	Caprylic Acid	
	Citrus Seed (GSE)	
	Coptis	
	Garlic	
	Golden Seal	
	Oregano	

NATURAL SUBSTANCES - BACTERIA	
Pseudomonas aeruginosa	Low InhibitionHigh Inhibition
Berberine	
Black Walnut	
Caprylic Acid	
Citrus Seed (GSE)	
Coptis	
Garlic	
Golden Seal	
Oregano	



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MYCOLOGY CULTURE

Organism	Growth	H/L	Ref Range	Classification
Candida albicans	3+	H	(<2+)	Possible Pathogen
Candida krusei	2+	H	(<2+)	Possible Pathogen
Candida parapsilosis	1+		(<2+)	Non-Pathogen
Geotrichum species	NEG		(<4+)	No Growth

SUSCEPTIBILITY - MYCOLOGY

Antimicrobials	<i>Candida albicans</i>	<i>Candida krusei</i>
Fluconazole	Susceptible	Resistant
Voriconazole	Susceptible	Susceptible

R Resistant S Susceptible I Intermediate NT Not Tested

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Candida albicans	Low Inhibition	High Inhibition
Nystatin		
Berberine		
Black Walnut		
Caprylic Acid		
Citrus Seed (GSE)		
Coptis		
Garlic		
Golden Seal		
Oregano		

NATURAL INHIBITORS - YEASTS	
Candida krusei	Low InhibitionHigh Inhibition
Nystatin	
Berberine	
Black Walnut	
Caprylic Acid	
Citrus Seed (GSE)	
Coptis	
Garlic	
Golden Seal	
Oregano	
Candida parapsilosis	Low InhibitionHigh Inhibition
Nystatin	
Berberine	
Black Walnut	
Caprylic Acid	
Citrus Seed (GSE)	
Coptis	
Garlic	
Golden Seal	
Oregano	

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The Four “R” Treatment Protocol

REMOVE	Using a course of antimicrobial, antibacterial, antiviral or anti parasitic therapies in cases where organisms are present. It may also be necessary to remove offending foods, gluten, or medication that may be acting as antagonists. Consider testing IgG96 foods as a tool for removing offending foods.	ANTIMICROBIAL	Oil of oregano, berberine, caprylic acid
		ANTIBACTERIAL	Liquorice, zinc carnosine, mastic gum, tribulus, berberine, black walnut, caprylic acid, oil of oregano
		ANTIFUNGAL	Oil of oregano, caprylic acid, berberine, black walnut
		ANTIPARASITIC	Artemesia, black walnut, berberine, oil of oregano
		ANTIVIRAL	Cat's claw, berberine, echinacea, vitamin C, vitamin D3, zinc, reishi mushrooms
		BIOFILM	Oil of oregano, protease
REPLACE	In cases of maldigestion or malabsorption, it may be necessary to restore proper digestion by supplementing with digestive enzymes.	DIGESTIVE SUPPORT	Betaine hydrochloride, tilactase, amylase, lipase, protease, apple cider vinegar, herbal bitters
REINOCULATE	Recolonisation with healthy, beneficial bacteria. Supplementation with probiotics, along with the use of prebiotics helps re-establish the proper microbial balance.	PREBIOTICS	Slippery elm, pectin, larch arabinogalactans
		PROBIOTICS	Bifidobacterium animalis sup lactose, lactobacillus acidophilus, lactobacillus plantarum, lactobacillus casei, bifidobacterium breve, bifidobacterium bifidum, bifidobacterium longum, lactobacillus salivarius sup salivarius, lactobacillus paracasei, lactobacillus rhamnosus, Saccharomyces boulardii
REPAIR & REBALANCE	Restore the integrity of the gut mucosa by giving support to healthy mucosal cells, as well as immune support. Address whole body health and lifestyle factors so as to prevent future GI dysfunction.	INTESTINAL MUCOSA IMMUNE SUPPORT	Saccharomyces boulardii, lauric acid
		INTESTINAL BARRIER REPAIR	L-Glutamine, aloe vera, liquorice, marshmallow root, okra, quercetin, slippery elm, zinc carnosine, Saccharomyces boulardii, omega 3 essential fatty acids, B vitamins
		SUPPORT CONSIDERATION	Sleep, diet, exercise, and stress management

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UNFORMED STOOL:

An UNFORMED stool specimen classified as Type 5 or 6 on the Bristol Stool Chart suggests rapid colonic transit, leading to inadequate water reabsorption and a looser stool consistency. This may result from mild digestive disturbances, dietary changes (such as high fibre or fat intake), stress, or gut microbiota imbalances (dysbiosis). Type 6, in particular, may indicate early-stage diarrhea, commonly linked to irritable bowel syndrome with Diarrhea (IBS-D), food intolerances (e.g., lactose, gluten, FODMAPs), gastrointestinal infections, or inflammatory responses. Clinical recommendations include identifying dietary triggers, ensuring adequate but not excessive fibre intake, and considering probiotic therapy (especially strains like *Lactobacillus* and *Bifidobacterium*) to help restore microbial balance. Persistent symptoms may warrant further evaluation for malabsorption syndromes (e.g., celiac disease, pancreatic insufficiency), small intestinal bacterial overgrowth (SIBO), or inflammatory markers to assess for underlying pathology.

Faecal occult blood has not been detected in this specimen. If the test result is negative and clinical symptoms persist, additional follow-up testing using other clinical methods is recommended.

beta-GLUCORONIDASE NORMAL:

B-Glucuronidase is considered normal and is within reference range.

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

PANCREATIC ELASTASE NORMAL (>200 ug/g):

A faecal pancreatic elastase level >200 $\mu\text{g/g}$ indicates normal exocrine pancreatic function.

CALPROTECTIN LOW POSITIVE (101-250 ug/g):

A low positive faecal calprotectin level (101–250 ug/g) suggests the presence of gastrointestinal inflammation, though not specific to IBD.

This degree of elevation may be associated with a spectrum of conditions, including mild IBD, gastroenteritis, neoplasia, or medication-related mucosal inflammation (notably from NSAIDs or PPIs). While it does not confirm a diagnosis of IBD, this result warrants further clinical evaluation, particularly if accompanied by persistent gastrointestinal symptoms.

Follow-up testing and/or referral to a gastroenterologist is recommended.

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.

HELICOBACTER PYLORI ANTIGEN: POSITIVE

A POSITIVE result, indicates a current infection and is not affected by the presence of other organisms, antacids, barium sulphate, blood or fat. Please correlate infection clinically with signs and symptoms.

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Triple therapy: PPI, clarithromycin and amoxicillin or metronidazole, 7-14 days.

If penicillin allergic: PPI, clarithromycin and clindamycin or metronidazole, 7-14 days.

A suggested follow up test is recommended within 4 weeks post therapy.

If treatment is unsuccessful, further investigation of *H. pylori* may be warranted using metagenomic sequencing to evaluate virulence factors and potential resistance gene markers.

Negative M2-PK values should be correlated with carcinoembryonic antigen (CEA) markers. M2-PK has a lower sensitivity and specificity in diagnosing pancreatic cancer compared to CA 19-9. However, in patients with adenocarcinoma there is a simultaneous increase of M2-PK and CA 19-9.

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

AEROMONAS SPECIES DETECTED by PCR

DNA consistent with the presence of *Aeromonas* species has been detected using PCR techniques.

Aeromonas have been implicated as a cause of both acute and persistent diarrhoeal illness (usually watery) and may be accompanied by fever and/or abdominal pain. Aeromonas is widely distributed in the freshwater, estuarine and marine environments and infection usually occurs in the summer months.

TREATMENT SUGGESTIONS:

Most cases of *Aeromonas*-associated diarrhoea are self-limited and can be managed with supportive therapy. If treatment is considered necessary, *Aeromonas* spp. are usually sensitive to Trimethoprim-Sulphamethoxazole and Fluoroquinolones. Sensitivity to tetracycline is variable.

Rule out allergy to above medication before prescribing/taking. Consult ID specialist if patient is showing severe symptoms or immunocompromised.

CRYPTOSPORIDIUM SPECIES DETECTED by PCR

DNA consistent with the presence of *Cryptosporidium* species has been detected using PCR techniques.

Cryptosporidium infection is thought to occur by environmentally resistant oocysts, zoonotic transmission, nosocomial transmission and direct person-to-person contact. Contamination of public water supply has been associated with outbreaks. Raw foods such as unpasteurized milk and raw meat can also harbor the organism. Cryptosporidium can cause an asymptomatic infection, a mild diarrhoeal illness, or severe enteritis. Symptoms may also include abdominal pain, malaise, nausea and fever.

TREATMENT SUGGESTIONS:

Cryptosporidiosis is generally self-limiting in immunocompetent patients, lasting approximately 2 weeks. In severe cases or immunocompromised treatment options include:

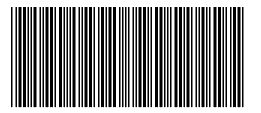
Nitoxanamide 500 mg (child 1 to 3 years: 100 mg; 4 to 11 years: 200 mg) orally, 12 hourly for 3 days

Rule out allergy to above medication before prescribing/taking. Consult ID specialist if patient is showing severe symptoms or immunocompromised.

PLEASE NOTE:

Cryptosporidium detection has been confirmed through a secondary PCR test.

This organism may be classified as a notifiable pathogen. Confirmation has been performed through repeat testing and/or verification on a secondary platform, where required. The result will be reported to the relevant Department of Health in accordance with statutory requirements. For specific state-based notification obligations, please refer to your local public health authority.



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KLEBSIELLA OXYTOCA: PHYLUM: Proteobacteria

Klebsiella oxytoca is a Gram-negative bacterium from the phylum Proteobacteria and is part of the human gut microbiome, typically present in low abundance as a commensal organism. It contributes to the microbial diversity of the gut but can become an opportunistic pathogen, particularly in immunocompromised individuals or during gut dysbiosis. *K. oxytoca* has been associated with antibiotic-associated hemorrhagic colitis, a form of colitis characterized by mucosal damage and bleeding (Hofmann et al., 2020). Beyond the gut, *K. oxytoca* is linked to hospital-acquired infections, such as pneumonia, urinary tract infections, and septicemia. Its potential for antibiotic resistance, including resistance to beta-lactam antibiotics, raises concerns in clinical settings. Monitoring *K. oxytoca* in the gut is important for understanding its role in health, disease, and antibiotic resistance dynamics.

PSEUDOMONAS AERUGINOSA: PHYLUM: Proteobacteria

Pseudomonas aeruginosa is a Gram-negative bacterium commonly known for its opportunistic pathogenicity. While it is primarily associated with infections in immunocompromised patients and chronic infections such as cystic fibrosis, its presence in the gut microbiome is less well-characterized. In the gut, *P. aeruginosa* can be part of the microbial community, often as a transient or minor member. Its potential impact on gut health includes interactions with other gut microbiota, which could influence inflammation and microbial balance (Pang et al., 2019). Despite its role as a pathogen, understanding its dynamics within the gut microbiome could offer insights into its broader ecological roles and impact on gastrointestinal health (Kresse et al., 2018).

STREPTOCOCCUS AGALACTIAE: Phylum: Firmicutes

Streptococcus agalactiae is a Gram-positive bacterium commonly found in the human gut microbiome. It is part of the group known as beta-hemolytic streptococci. While *S. agalactiae* is predominantly recognized for its role as a pathogen causing infections in neonates, pregnant women, and immunocompromised individuals, it is also a normal component of the gut microbiota. Within the gut, *S. agalactiae* may influence microbial diversity and contribute to the overall balance of the gut flora. Its presence in the gut microbiome is linked to potential impacts on gut health and immune responses, though its pathogenic potential under certain conditions is well-documented (Schrage et al., 2002; Kline et al., 2011).

CANDIDA KRUSEI: PHYLUM: Ascomycota

Candida krusei is a yeast belonging to the phylum Ascomycota and is found as part of the human gut microbiome. Unlike more common *Candida* species, *C. krusei* is intrinsically resistant to fluconazole, a widely used antifungal, which makes it a significant concern in clinical settings (Pfaller and Diekema, 2007). While generally present in low abundance in the gut, it can act as an opportunistic pathogen, particularly in immunocompromised individuals or those undergoing prolonged antibiotic or antifungal treatments. In the gut microbiome, *C. krusei* is usually commensal, but when gut dysbiosis occurs, such as during illness or antibiotic use, it may proliferate and contribute to infections like candidiasis (Papon et al., 2013). Monitoring its levels is critical, especially in hospital environments, to prevent and manage potential gut-related infections.

CANDIDA PARAPSILOSIS: PHYLUM: Ascomycota

Candida parapsilosis is a yeast from the phylum Ascomycota and is a part of the human gut microbiome. Typically found in low abundance, it can act as a commensal organism but has the potential to become opportunistic, particularly in immunocompromised individuals or those undergoing gut dysbiosis (Tavanti et al., 2005). *C. parapsilosis* is often associated with invasive infections, such as fungemia, especially in hospital settings, where it can cause catheter-related bloodstream infections. In the gut microbiome, its role is generally minor, but its ability to form biofilms and resist certain antifungal agents makes it a concern when overgrowth occurs. Monitoring *C. parapsilosis* levels in the gut is important for understanding its potential contribution to infection, particularly in vulnerable populations.

BIFIDOBACTERIUM BIFIDUM LOW:

