

## Your Test Results - Intestinal Permeability and Absorption Analysis (IPA Analysis)

### Absorption Capacity

Mannitol is a small sugar molecule that is used to measure absorption capacity and provide indirect evidence of inflammation in the small intestinal mucosa. Low levels of mannitol in urine indicates possible decreased nutrient absorption and indirect evidence of inflammation in the small intestinal mucosa.

Your Result: **280.588 - Normal**

Mannitol

Normal Range: >90

The absorption of nutrients is normal. No defects in intestinal mucosa transport mechanisms were detected



### Intestinal Permeability

Cellobiose is a large sugar consisting of two glucose molecules. It is typically indigestible and unabsorbable by humans, but may be absorbed if the small intestinal mucosa is inflamed. High levels of cellobiose in urine indicates inflammation in the small intestines and reflects increased intestinal permeability.

Your Result: **3.833 - Borderline**

Cellobiose

Normal Range: 0.000-3.000

Intestinal permeability is slightly abnormal. The intestinal mucosa has partially lost its selective absorption capacity, thus allowing the absorption of molecules that are potentially harmful to the immune system. This often causes an increase in antigenic intolerance, a condition that heightens allergic responses.



### Gastric Permeability

Sucrose (table sugar) does not usually cross the gastrointestinal lining unless the lining is damaged or inflamed. Sucrose is normally broken down rapidly in the small intestines and should not be detected in urine. The presence of sucrose in urine will indicate possible increased gastric permeability.

Your Result: **3.075 - Borderline**

Sucrose

Normal Range: 0.000-2.500

Gastric permeability is slightly abnormal. The mucosa has lost its selective absorption capacity, thus allowing early absorption of some molecules. The gastric walls are possibly experiencing chronic inflammation, with a consequent reduction of gastric secretions.



### Intestinal Damage

Raffinose is a trisaccharide that is indigestible in the human gut. It is a useful marker of intestinal villi health, as it may be absorbed in cases of inflammation. A high raffinose/ mannitol ratio is an indication of damage to the epithelial tissue in the duodenum.

Your Result: **0.004 - Normal**

Raffinose/Mannitol

Normal Range: 0.000-0.012

No structural lesions in intestinal mucosa were detected. No inflammation can be seen; the intestinal wall appears healthy.



### Lactose Intolerance

Lactose is a disaccharide found most commonly in milk. In a properly functioning gastrointestinal tract, the enzyme lactase metabolizes lactose. A lack of lactase or a reduced lactase activity leads to lactose intolerance. If the lactose/raffinose ratio is high, we can accurately detect lactose intolerance.

Your Result: **0.019 - Normal**

Lactose/Raffinose

Normal Range: 0.000-0.400

No alterations in lactase activity were detected, suggesting adequate lactose tolerance.



### Sucrose Intolerance

Sucrose (table sugar) is a disaccharide normally hydrolyzed by the enzyme sucrase in the duodenum. It should thus not be detected in urine. A sucrose/raffinose ratio helps detect sucrose intolerance. If the ratio is high this indicates sucrase deficiency, possibly secondary to gastroduodenal inflammation or damage.

Your Result: **0.142 - Normal**

Sucrose/Raffinose

Normal Range: 0.000-0.280

No deficit in the activity of sucrase is detected, suggesting healthy sucrose tolerance.

