

# Faecal Reducing Substances

## Synonyms

## Clinical Indication

Patients with carbohydrate malabsorption either cannot absorb a sugar or do not have the enzyme to break down a sugar. In lactase deficiency (converts lactose to glucose and galactose), lactose is not digested and absorbed but ferments to lactic acid with production of gas. This causes abdominal pain and diarrhoea which may be persistent and severe especially in young children.

Stools from patients with carbohydrate malabsorption are characterised by being liquid, frothy and acidic. Faecal pH has not been found to be reliable as a screening test for sugar malabsorption.

Faecal reducing substance results should be interpreted with severe caution, it is a screening test which lacks sensitivity and specificity. Positive results can be seen in normals and negative results in patients with disaccharidase deficiency. Often dietary restriction of lactose is necessary as an empirical test or alternatively, the hydrogen breath test may be required - please contact Gastroenterology department (Basildon Hospital) or Biochemistry department (Southend Hospital) for further information.

Paediatrics: If the baby is otherwise well and the problem is only loose stools then perseverance with feeding may be an option (to see if the problem resolves within a few days) or try an alternative milk based formula for a trial period. If there is evidence to suggest cow's milk protein intolerance this requires further testing to confirm and referral to a paediatric dietician / paediatrician if there is other significant evidence of allergy. If the problem is persistent or is more than just loose stools then the infant requires referral to a paediatrician/paediatric gastroenterologist.

Requests from Basildon Hospital – will not be processed unless discussed in advance with the Biochemist.

**Samples must arrive in the laboratory within 30 minutes of collection.**

## Part of Profile / See Also

## Request Form

Combined Pathology manual Blood form or ICE request

## Availability / Frequency of Analysis

Referred test: Analysed by Chemical Pathology, Great Ormond Street Hospital if specific criteria met. [\(8692\)](#)

## Turnaround Time

Up to 4 weeks

## Patient Preparation

## Sample Requirements

### Specimen Type

Stool sample

### Volume

1g

### Container

Blue or white top universal container

**Reference Range & Units**

All sugars <1 mmol/kg

**Interferences**

Interpretation assumes normal dietary sugar intake. Bacterial digestion of sugars occurs if specimens are not frozen promptly (within 30 mins). Test lacks sensitivity and specificity.

**Interpretation & Clinical**
**Decision Value (if applicable)**
**References**
**Test code**

FRS

**Lab Handling**

Samples must be received in the laboratory and frozen at -20C in the referrals rack within 30 minutes. This time is critical, samples frozen outside of 30 minutes are not suitable for analysis and will not be referred for analysis. Samples sent at least once a week by courier (frozen) to Great Ormond Street.



Accredited to  
ISO 15189:2012