

¹³C Lactose Breath Test

RELEVANCE:

Investigation lactose digestion, especially of detecting lactase deficiency in patients with gastrointestinal symptoms. For the diagnosis of hypolactasia at least in children the test should be combined with the traditional H₂-lactose breath test. Discordant results of the two tests indicate that a jejunal biopsy should be performed.

SUBSTRATE:

Oral dose of 475 mg [glucose-1-¹³C]galactose/m² of body surface area (90 atom% ¹³C)

STATUS OF PATIENT:

After a fasting period of five (infants) or eight (children and adults) hours, respectively

TIMING OF SAMPLE COLLECTION: 0, 90 minutes

EVALUATION:

With a cut-off level of 14.5% of the 4-hour cumulative ¹³CO₂ excretion, which can be calculated using the FANci-software, the test yields a sensitivity of 84% and a specificity of 96% thus exceeding the corresponding values of H₂-breath test. Simultaneous absorption of substrate both from the small and large intestine may limit the usefulness of ¹³C-breath tests in premature infants.

REFERENCES:

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