

¹³C Methacetin Breath Test

RELEVANCE:

Diagnosing liver disease and investigating hepatic microsomal biotransformation

SUBSTRATE / TEST DRINK:

Oral dose of 1.62 mg/kg body mass (babies: 0.40 mg/kg body mass) of p-¹³C-methoxyacetanilide (¹³C-methacetin, 99% ¹³C), dissolved in 100 ml of unsweetened warm black tea (< 40°C). For babies 50 ml of warm water (< 40°C) is used as a solvent.

STATUS OF PATIENT:

After overnight fast. Adults are asked to avoid physical activity during the test period.

TIMING OF SAMPLE COLLECTION:

If the test is aimed at discriminating between cirrhotic and non-cirrhotic individuals, breath is sampled immediately before and 20 minutes after tracer intake.

If the test is to identify different grades of cirrhosis, the second breath sample should be taken 30 instead of 20 minutes after the first one. The average DOB-values are then 14.3±6.4 (n=24) for Child A, 9.0±6.3 (n=35) for Child B and 2.4±2.2 (n=17) for Child C cirrhotic patients.

EVALUATION:

With a cut-off value of DOB=25‰ sensitivity and specificity of discrimination between cirrhotic and non-cirrhotic individuals are 93.5 and 95%, respectively.

REFERENCES:

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