FECAL METALS

The Great Plains Laboratory, Inc.
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LAB#:
PATIENT:
ID:
SEX:
AGE:

POTENTIALLY TOXIC METALS

METALS	RESULT mg/kg	REFERENCE RANGE	PERCENTILE 68th 95th
Mercury	**0.021**	<.05 w/o amalgams*	
Mercury	**0.021**	< .5 with amalgams*	
Antimony	**0.121**	< 0.080	
Arsenic	**0.18**	< 0.30	
Beryllium	**0.067**	< 0.009	
Bismuth	**0.611**	< 0.050	
Cadmium	**0.69**	< 0.50	
Copper	**55**	< 60	
Lead	**1.14**	< 0.50	
Nickel	**12.9**	< 8.0	
Platinum	**< dl**	< 0.003	
Thallium	**0.016**	< 0.020	
Tungsten	**0.338**	< 0.090	
Uranium	**0.168**	< 0.120	

% WATER CONTENT

	RESULT % H_2O	EXPECTED RANGE	2SD LOW 1SD LOW MEAN 72.5% 1SD HIGH 2SD HIGH
% WATER CONTENT	**63.4**	60-85%	

DISCUSSION

Analysis of elements in feces provides a comprehensive evaluation of environmental exposure, accumulation and endogenous detoxification of potentially toxic metals. For several toxic elements such as mercury, cadmium, lead, antimony and uranium, biliary excretion of metals into feces is the primary natural route of elimination from the body. Studies performed at DDI demonstrate that the fecal mercury content and number of amalgam surfaces are highly correlated, as is the case for post-DMPS urine mercury levels and amalgam surface area.

Results are reported as mg/kg dry weight of feces to eliminate the influence of variability in water content of fecal specimens. The reference values that appear in this report have been derived from both published data and in-house studies at DDI. *Due to exposure to mercury in the oral cavity, people with dental amalgams typically have a considerably higher level of mercury in the feces than individuals without dental amalgams; therefore, two reference ranges have been established for mercury.

To provide guidance in interpretation of results, patient values are plotted graphically with respect to percentile distribution of the population base. Since this test reflects both biliary excretion and exposure (metals to which the patient is exposed may not be absorbed), it may not correlate with overt clinical effects. Further testing can assist in determining whether the metals are from endogenous (biliary excretion) or exogenous (oral exposure) sources.

1. Bjorkman, L, Sandborgh-Englund, G, and Ekstand, J,. Mercury in Saliva and Feces after Removal of Amalgam Fillings. Toxicology & Applied Pharmacology 144: 156-162 (1997)
2. Zalups, R, Progressive Losses of Renal Mass and the Renal and Hepatic Disposition of Administered Inorganic Mercury. Toxicology & Applied Pharmacology 130: 121-131 (1995)
3. Adamsson, E., Piscator, M., and Nogawa, K., Pulmonary and Gastrointestinal Exposure to Cadmium Oxide Dust in a Battery Factory. Environmental Health Perspectives, 28: 219-222 (1979)
4. Smith,J., et al., The Kinetics of Intravenously Administered Methyl Mercury in Man. Toxicology & Applied Pharmacology 128:251-256 (1994)
5. Bass, D., et al., "Measurement of Mercury in Feces", Poster presentation 1999 AACC

SPECIMEN DATA

Comments:
Date Collected:
Date Received:
Date Completed:
Detoxification Agent:
Methodology:
Dental Amalgams:
Quantity:

V02.00

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