Micro Trace Minerals Laboratory
40+ years of clinical & environmental laboratory diagnostics

Roehrenstr. 20
91217 Hersbruck, Germany

Phone +49.9151.4332
Fax +49.9151.2306

info@microtraceminerals.com
www.microtraceminerals.com

MTM Newsletter **N° 16 - March 2016**

- Laboratory News
  - Compact News
  - Reference and Orientation Ranges
  - More is not better
  - DMSA oral - Bioavailability and dose-dependent metal excretion
  - Guide to Metal Toxicology
  - Combination treatments
- Medical Workshops and Conferences
  - Conferences and Workshops 2016
- Studies and Analyses
  - EDTA and TACT (Trial to Assess Chelation Therapy), second trial

Laboratory News

Compact News

We realize how precious time is, and how little time we have to read lengthy articles. Therefore, we summarize important news. Contact us for more information.

Reference and Orientation Ranges

We have updated existing ranges and added new Orientation Ranges for combination treatments such as ZnDTPA and DMPS.
This will allow a more precise evaluation and comparison of test results.

More is not better

We have statistically evaluated the hypothesis that more of a chelating substance increases urinary excretion values accordingly. From our data, we can postulate that this is not the case. We verified the following data supplied by Heyl, Berlin (manufacturer of Dimaval):

DMPS oral - Urinary Copper excretion

DMPS oral in mg/kg	Copper excretion in %
25	171
50	197
100	235

The manufacturer of Dimaval lists a bioavailability of about 50% for oral DMPS. This is in agreement with our urine data comparison of DMPS iv vs. DMPS oral.
The statistical evaluation of urine excretion data obtained after the intravenous application of 1 ampule DMPS (250mg active substance) vs 5 ampules DMPS (1250mg active substance), administered one after another at the same sitting, showed little effect. In fact, the median suggests that the application of more than one ampule DMPS provides no advantage. With the exception of copper, selenium, zinc and urine creatinine level, the median concentration for toxic elements in urine stayed the same or decreased slightly.

Micro Trace Minerals Laboratory
40+ years of clinical & environmental laboratory diagnostics

Roehrenstr. 20
91217 Hersbruck, Germany

Phone +49.9151.4332
Fax +49.9151.2306

info@microtraceminerals.com
www.microtraceminerals.com

DMSA oral - Bioavailability and dose-dependent metal excretion

The bioavailability of a chelating substance is affected by the route of administration and the pH of the environment in which it circulates. International citations list the bioavailability of DMSA between 20 and 50%. We assume that gastrointestinal function is an important factor in determining an oral chelator's bioavailability, its metal binding and urinary excretion. Oral chelators first find and bind metals located in the GI Tract, therefore fecal metal binding influences urinary metal excretion. GI 'cleansing' may have to come before a urine provocation or challenge test. Attention to pH seems warranted.

We compared urinary metal concentration of a 500mg oral dose with that of 1000mg and found little difference in metal excretion. See Table below:

DMSA oral	N = # of Tests	Lead	Mercury	Copper	Iron	Zinc
500mg	169	12.0	3.7	57.8	15.8	700
1000mg	219	13.8	3.9	75.2	15.6	700

Median value in mcg/g Creatinine

Guide to Metal Toxicology

Our new German "Handbuch der Metall Toxikologie", is a cookbook version of a chelation therapy textbook. It provides updated protocols for various chelating agents, statistical data indicating the efficacy of metal binding for each chelator, data based suggestions for treatment schedules based on provocation test results and practical treatment tips.

The English version 'The Handbook of Metal Toxicology' is available soon.

Combination treatments

There is no advantage in combining chelating agents with similar function (i.e. vicinal dithiol such as DMSA and DMPS) especially if applied in the same manner (i.e. oral).
When EDTA iv is combined with oral DMSA, the vascular and the GI tract are detoxified at the same time; however statistics involving urinary metal tests do not provide evidence that the combination treatment increased renal metal excretion more than the single administration of intravenous EDTA would. Fecal metal testing can provide answers regarding fecal detox.

Micro Trace Minerals Laboratory
40+ years of clinical & environmental laboratory diagnostics

Roehrenstr. 20
91217 Hersbruck, Germany

Phone +49.9151.4332
Fax +49.9151.2306

info@microtraceminerals.com
www.microtraceminerals.com

Medical Workshops and Conferences

- **International Conferences & Workshops 2016**

03/06/2016	**Seminar Melbourne** **Update on Chelation, Diagnostics & Treatment** Melbourne, Australia (English)
03/08/2016	**Seminar Brisbane** **Update on Chelation, Diagnostics & Treatment** Brisbane, Australia (English)
03/09/2016	**Seminar Sydney** **Update on Chelation, Diagnostics & Treatment** Sydney, Australia (English)
04/09/2016	**Nonmedical Seminar** **Update on Chelation, Diagnostics & Treatment** Nuremberg, Germany (German)

Details and updates under:
http://www.microtraceminerals.com/en/workshops

Studies and Analyses

- **EDTA and TACT (Trial to Assess Chelation Therapy), second trial**

The National Center for Complementary and Integrative Health (NCCIH) of the National Institutes of Health (NIH) has awarded $800,000 to Mount Sinai Medical Center of Florida and the Duke Clinical Research Institute to initiate a planning year for the second Trial to Assess Chelation Therapy (TACT2). We suggest that the metal detoxification effect of EDTA is included in the study. EDTA chelation removes toxic metals from the vascular system, thereby reducing inflammation and increasing the blood flow - all of which can be documented.

If you have any questions please feel free to contact us.

We wish you a nice time.

Your

E.Blaurock-Busch and Team