

Ordering Physician:
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0058 Nutrient & Toxic Elements - 24 Hour Urine - Chelated

Methodology: Gas Chromatography/Mass Spectrometry

Chelating Agent: DMSA



Toxic Elements

1. Aluminum	<DL		<= 19.8	<= 27.6
2. Arsenic	<DL		<= 156	<= 157
3. Cadmium	1.16		<= 0.75	<= 1.46
4. Lead	2.83		<= 1.19	<= 14.40
5. Mercury	3.7		<= 1.94	<= 7.82
6. Thallium	0.41		<= 0.61	<= 0.96

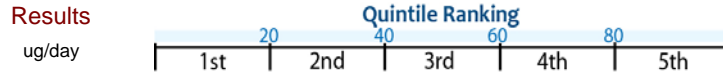
Potentially Toxic and Rare Earth Elements

7. Antimony	<DL		<= 0.26	<= 0.39
8. Barium	1.7		<= 9.0	<= 21.0
9. Bismuth	<DL		<= 0.69	<= 6.49
10. Cerium*	<DL		<= 0.14	<= 0.16
11. Cesium	<DL		<= 13.4	<= 18.9
12. Europium*	<DL		<= 0.008	<= 0.022
13. Holmium*	<DL		<= 0.008	<= 0.027
14. Indium	<DL		<= 0.020	<= 0.027
15. Niobium	<DL		<= 0.050	<= 0.056
16. Palladium	<DL		<= 0.47	<= 4.47
17. Platinum	<DL		<= 2.7	<= 2.7

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Non-Chelated
95% Reference
Range

Chelated
95% Reference
Range

Potentially Toxic and Rare Earth Elements

Element	Results	Quintile Ranking	Non-Chelated 95% Reference Range	Chelated 95% Reference Range
18. Rubidium**	<DL	1st	<= 3.47	<= 4.13
19. Samarium*	<DL	1st	<= 0.03	<= 0.05
20. Tantalum	<DL	1st	<= 0.18	<= 0.20
21. Tellurium	<DL	1st	<= 0.82	<= 1.17
22. Terbium*	<DL	1st	<= 0.01	<= 0.01
23. Thorium	<DL	1st	<= 0.15	<= 0.23
24. Thulium*	<DL	1st	<= 0.006	<= 0.013
25. Tin	0.4	4th	<= 2.9	<= 4.0
26. Tungsten	0.02	2nd	<= 0.58	<= 1.22
27. Uranium	<DL	1st	<= 0.031	<= 0.090
28. Zirconium	<DL	1st	<= 1.40	<= 3.25

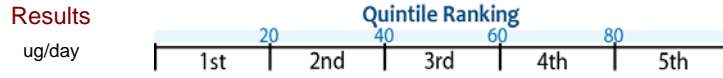
Nutrient Elements

Element	Results	Quintile Ranking	Non-Chelated 95% Reference Range	Chelated 95% Reference Range
29. Calcium**	111	96	6-397	30-517
30. Chromium	2.45	0.06	0.05-1.16	0.05-3.32
31. Cobalt	0.24 L	0.38	0.07-2.02	0.23-25.48
32. Copper	10.1 L	12	3-31	7-79
33. Magnesium**	76	57	20-266	14-300
34. Manganese	18.1		<= 2.02	<= 30.54
35. Molybdenum	15 L	22	6-210	10-281
36. Selenium	39 L	42	4-191	7-270
37. Zinc	329	326	35-1612	142-12698

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Range

Chelated
95% Reference
Range

Elements of Uncertain Human Requirement

Element	Results (ug/day)	Quintile Ranking	Non-Chelated 95% Reference Range	Chelated 95% Reference Range
38. Boron**	0.9 L	1 (5.5)	0.1-7.0	0.3-9.5
39. Lithium	11 L	21 (119)	4-114	11-277
40. Nickel	3	1.8 (6.3)	0.1-7.9	1.0-8.6
41. Strontium	73 L	92 (340)	19-467	68-492
42. Vanadium	6.98 H	0.41	<= 0.53	<= 1.52

Volume = 987 mL

<DL = less than detection limit

*Rare Earth Element

**Calcium, magnesium, boron and rubidium are reported in mg/day.

Chelated ranges were created by pooling samples received from patients that were provoked with DMSA, EDTA, or other chelating agents.