

Below the mineral and vitamin requirements of dairy cows are shown\*. The requirements assume that bioavailability of minerals and vitamins are normal, but if excessive antagonists are consumed, requirements may not be adequate. Trace mineral requirements are given as grams or milligrams of each mineral that must be absorbed each day, not as dietary concentrations. To convert

requirements to dietary concentrations, one must know dry matter intake and the absorption coefficient of the mineral. Intake can be measured on-farm or estimated using equations. Average absorption coefficients for common sources of supplemental minerals can be found in NRC requirements (2001) at: [http://www.nap.edu/openbook.php?record\\_id=9825&page=105](http://www.nap.edu/openbook.php?record_id=9825&page=105)

Mineral	Unit	Dry cow		Lactating cow	
		8-3 weeks before calving	3-0 weeks before calving	20 L/day	20 L/day
Ca	g/day	27	31	60	100
P	g/day	21	22	47	79
Mg	g/day	22	23	38	56
Na	g/day	7.6	6.6	20	33
K	g/day	56	55	134	190
Cl	g/day	7.7	8.5	37	66
S	g/day	1.5 - 2	1.5 - 2	1.5 - 2	1.5 - 2
Cu	mg/day	277	277	227	260
Co	mg/day	1.2	1.1	1.9	2.4
J	mg/day	5.5	5.5	9.5	12
Zn	mg/day	246	246	490	763
Mn	mg/day	460	440	740	940
Fe	mg/day	345	345	150	300
Se	mg/day	1.44	1.44	2.72	4.22

  

Vitamin	Unit	Lactating cow
Vit. A <sup>1</sup>	IU/day	77000
Vit. D	IU/day	21900
Vit. E <sup>1</sup>	IU/day	1000

\* Source: Handleiding Mineralenvoorziening Rund-vee, Schapen, Geiten, 2005 Centraal veevoederbureau ([www.pdv.nl](http://www.pdv.nl))

**References:**

<sup>1</sup>Weis, W.P. (2002) Relationship of mineral and vitamin supplementation with mastitis and milk quality. National Mastitis Council Annual Meeting Proceedings. The Ohio State University Wooster, Ohio.