

MINERALS

(See also [Trace elements](#))

Essential to life, minerals cannot be produced by the human body. They are classified into two categories according to their abundance in the human body:

- **Major minerals or macro elements:** calcium (Ca), chlorine (Cl), magnesium (Mg), phosphorus (P), potassium (K) and sodium (Na).
- **Trace elements:** chromium (Cr), copper (Cu), iron (Fe), fluorine (F), iodine (I), manganese (Mn), molybdenum (Mo), selenium (Se), cobalt (Co) and zinc (Zn).

Certain minerals intervene in a massive proportion in the bones' constitution (99% of Ca, 85% of P and 55% of Mg of the body) and in ionic balances of the body liquids (K, Na, Cl). Most of them also play a role, in a small concentration, in innumerable vital body functions (as catalysts, activators, regulators, etc).

They are essential to: storage and use of energy and that of many molecules, transfer of various nutrients (Ca, K, Na), blood coagulation (Ca), nervous and muscular transmission, oxygen transfer (Fe), membranes' permeability, etc. they function as antioxidants (Zn, Se, etc). Some, such as calcium, play multiple roles (functional but also structural) whereas others have more specific roles (ex: iodine is part of the thyroid hormones' composition).

Milk contains a large quantity of minerals (approximately 900 mg/100 ml including trace elements). Their concentration in milk depends on many factors such as the lactation period, the season, the nature of the soil, the breed of the cow...

Calcium is the major element (120 mg/100 ml) which gives milk and dairy products their exceptional properties (see calcium). Milk also contains potassium, sodium, phosphorus, and magnesium often associated with chlorine.

Minerals in milk	mg/100 mld
Potassium (K)	150
Calcium (Ca)	120
Phosphorus (P)	90
Sodium (Na)	45
Magnesium (Mg)	10