Mineral Supplementation in Cat Foods

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Minerals are essential nutrients needed by the body, and though they are present in natural food ingredients, supplementation of cat foods is usually required to meet the nutrient requirement standards developed by the Association of American Feed Control Officials (AAFCO). The following table lists mineral sources which are commonly found in cat foods. Foods high in each mineral are also listed.

Mineral	Mineral Supplement Sources	Food Sources	Comments
Calcium (without phosphorous)	Calcium carbonate Limestone	Poultry by-product meal, lamb meal, fish meal	
Calcium and phosphorus	Curacao phosphate Defluorinated phosphate Dicalcium phosphate* Mono and tricalcium phosphate Soft rock	Bone meal	
Phosphorus	Phosphoric acid Sodium tripolyphosphate	Meats, eggs, milk products	
Magnesium	Magnesium oxide Magnesium sulfate	Bone meal, lamb meal, oilseed/protein supplements, wheat and oat bran, beet pulp, soymill run	

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Potassium	Potassium citrate Potassium chloride Potassium sulfate	Soybean meal, unrefined grains, sunflower hulls, rice and wheat bran, soymill run, yeast	
Sodium and chloride	Sodium chloride (salt) Sodium acetate Sodium tripolyphosphate Calcium chloride Potassium chloride Choline chloride	Fish, eggs, dried whey, poultry by-product meal, soy isolate	
Iron	Ferrous sulfate Ferric ammonium citrate Ferrous fumarate Ferric chloride Ferrous carbonate Ferric oxide Ferrous oxide	Meats, beet pulp, peanut hulls, soymill run, dicalcium phosphate*	The iron in iron oxide is in a form that cannot be readily used by the body
Copper	Cupric carbonate Cupric chloride Cupric hydroxide Cupric oxide Cupric sulfate	Meat, especially liver	Absorption decreased in the presence of calcium, zinc, iron, and phytate; the copper in copper oxide is in a form that cannot be readily used by the body

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Manganese	Manganese carbonate Manganous chloride Manganous oxide Manganese sulfate Manganous sulfate	Sources of fiber, dicalcium phosphate*	
Zinc	Zinc carbonate Zinc chloride Zinc oxide Zinc sulfate	Meats, sources of fiber, dicalcium phosphate*	Absorption decreased in the presence of calcium, phosphate, copper, iron, cadmium, chromium, and phytate
Iodine	Calcium iodate Potassium iodide Cuprous iodide Iodized salt	Fish, eggs, iodized salt, poultry by-products	
Selenium	Sodium selenite Sodium selenate		The selenium in foods is in a form that cannot be readily used by the body; selenium supplementation in cat food is generally needed
* Dicalcium phosphate is derived from bones and contains minerals other than calcium and phosphorous			

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