

Nutrition is one of the main factors in health. Food supplement Nutrition is one of the main factors in the health. Food supplement plays an important role on the health of living organism. Nowadays, dicalcium phosphate is used as food supplement in veterinary industry. The importance of the supplement is so much in veterinary industry that synthesis of the supplement is under researching and measuring. Dicalcium phosphate is synthesis in our country by adding non purified phosphoric acid to lime powder or calcium carbonate with rock powder on cement pond. Using this traditional method poses the risk of contamination with heavy metals. Lead, cadmium, arsenic, mercury and fluorine elements would be dangerous and harmful to living organisms. Widespread use of this supplement in animal and veterinary industry, makes the heavy metal contamination's potential much important. In the current study, the lead, cadmium, arsenic, mercury and fluorine amounts were measured in the 8 companies' productions of dicalcium phosphate by atomic absorption. Results showed that, amounts of lead, cadmium and arsenic did not differ significantly among the companies ($P > 0.05$), and their lead and cadmium amounts were at the standard level. The mercury levels of the "ب" company were higher than the other products, and was statistically greater compared to all products except than "د" company ($P < 0.05$). Fluorine amount of "ج" company were significantly greater than other measured products of companies ($P < 0.05$). The screening protocols before usage by the consumers, could improve the levels of general and public health.

Key words: supplement, atomic absorption, lead, cadmium, arsenic, mercury, fluorine, Dicalcium phosphate