μg/kg, and the positive samples contained aflatoxins above this concentration. Quality control of the method was done by running a negative and positive control each day before testing.

Additional analysis was undertaken for positive samples, by confirmation methods (TLC or HPLC with fluorescence detection). Approximately 90% of positive samples analyzed with immunoassay technology were confirmed by other analytical techniques.

References


LEAD, CADMIUM AND ZINC CONTENTS IN SHEEP’S MILK FROM POLLUTED REGION IN R. OF MACEDONIA

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Key words: Lead, Cadmium, Zinc, Sheep’s Milk

Environment pollution with heavy metals appears to be more frequently a serious danger for human and animals health. There are many pollution sources, among which most important are traffic and industry. In certain regions dominant pollution sources are bloomer’s for colored and toxic metals. In this study, during the year 1999, some examinations were undertaken on the lead, cadmium and zinc content in sheep’s milk. Samples were collected from animals that were grown in Vales city region where lead and zinc bloomery is settled. Two groups of animals were observed: the first was contaminated one, that was farmed on sites 1-5.5 km away from the bloomery, the second one was from places 14.5 to 20 km away from the pollution source.

Lead and cadmium concentration determination was performed with electrothermal atomic absorption spectrometry (ET AAS) on Perkin Elmer 1100 B instrument, equipped with HGA 700 graphite furnace. Zinc concentrations were measured by flame atomic absorption spectrometry.

Lead, cadmium and zinc content in sheep’s milk from the polluted sites was to be 0.047-0.090 mg/L, 0.002-0.006 mg/L, and 5.00-7.66 mg/L respectively. The contents of these metals in the sheep’s milk samples taken from unpolluted sites were found to be 0.002-0.028 mg/L for lead, 0.000-0.001 mg/L for cadmium, and 3.67-4.72 mg/L for zinc.

References: