

**Comparative Study of Trace Metals
And Common Impurities of Table Salt Produced in
Leganes, Iloilo and Tibiao, Antique**

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ABSTRACT

Trace metals such as cadmium (Cd), chromium (Cr) and lead (Pb) as well as the common impurities in salt like magnesium (Mg), calcium (Ca), sulfate, moisture, matter insoluble in water (MIW) and matter insoluble in acid (MIA) were analyzed using spectrophotometric (Flame Atomic Absorption & UV-vis Spectrophotometers) and gravimetric methods.

Results showed that percentage concentrations of magnesium and calcium were significantly higher in sample A (Tibiao table salt) than in sample B (Leganes table salt) at 1-percent level of confidence. The percentage concentrations of MIW, MIA, moisture and sulfate were significantly higher in sample B than in sample A.

Results of UV-vis absorption spectroscopy indicated that both chromium and cadmium were absent in both samples while the lead concentrations in samples A and B were 10.9190 and 11.4831 ppm respectively. At 5% level of probability, the lead concentrations of both samples did not differ from each other.

Using another technique of analyzing trace metals, the flame atomic absorption spectroscopy based on flame atomization, different results were obtained. Lead concentration in samples A and B were 6.4874 and 9.4977-ppm salt respectively. At 5 % level of probability, sample B had higher lead concentration than in sample A. The lead concentrations in both samples were all higher than 0.015 ppm, the allowable maximum limit of lead in water, or any drinks.

The over-all results showed that sample B had higher contaminants than in sample A.