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# **THERMAL STORAGE EFFECT ON FUNGICIDE CONTAINING COPPER OXYCHLORIDE, FOSETYL ALUMINIUM, CYMOXANIL AND THEIR RELEVANT IMPURITIES.**

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## **ABSTRACT**

A fungicide containing copper oxychloride, fosetyl aluminium and cymoxanil under trade name viten triplor 60.95% Water Dispersible Granules (WG) was stored for 28 days at 54°C according to FAO specifications to study thermal storage effect on copper oxychloride relevant impurities lead, cadmium and arsenic and study the behavior of water as relevant impurities for fosetyl aluminium and also study the stability of active ingredients for copper oxychloride as metallic copper, fosetyl aluminium and cymoxanil against thermal storage decomposition. Physical properties such as pH values, wet sieve test, suspensibility, persistent foam, degree of dispersion and wettability studied also. Results showed that arsenic and cadmium as relevant impurities from copper oxychloride become conformity with FAO specifications (1989) where, arsenic not detected before and after storage and cadmium was 11.68 mg/kg before storage and reached 10.55 mg/kg after 28 days of storage. Lead was 114.62 mg/kg before storage and reached to 112.36 mg/kg after 28 days of storage and became non conformity with FAO specifications (1989) before and after storage. Water as relevant impurities from fosetyl aluminium become not conformity with FAO specifications (2013) before and after storage where, it was 26.6 g/kg before storage and reached 20.1 after 28 days of storage. There is slightly degradation in active ingredients with extending storage time and became conformity with FAO specifications where, percentage of copper, cymoxanil and fosetyl aluminium at one day before storage was 16%, 2.83% and 29.93% respectively and reached 15.91%, 2.68% and 29.24% after 28 days of storage respectively. Half-lives (days) of metallic copper, fosetyl aluminium and cymoxanil were 82.46, 26.96 and 8.02 after storage for 28 days at 54 °C respectively. All physical properties passed successfully and became conformity with FAO specifications (1989), (2006) and (2013).

**Keywords:** Cymoxanil, fosetyl aluminium, Fungicides, and storage.