

Toxicity of Tetramethyl Thiurem Disulfide

Summary and Conclusions

Guinea pigs fed tetramethyl thiurem disulfide ^{CONTAINED IN NO. CBI} as low as 60 mg. daily, reacted violently and acutely after receiving the first treatment. Severe convulsive seizures in five and paresis of the legs in one out of the ten animals occurred.

Rats receiving 4 mg. daily for 35 treatments manifested slight variations from the normal. Prior existing deficiencies in Red Blood Cell counts and Hemoglobin values in the animals disappeared while the animals were under treatment. A change in temperament and disposition of the animals under treatment were noted.

Two out of three dogs fed tetramethyl thiurem disulfide in doses of 5 mg./kg. body weight daily for 9 weeks, and 10 mg./kg. daily for ³ ~~three~~ additional weeks first began to show consistent abnormalities of the circulation in the seventh week of treatment, as determined by a very sensitive method of measurement. Again the same stimulating effect on the ^l ~~hematopoietic~~ system as occurred in the small animals was noted. One dog out of the three evidenced kidney disturbance. It is highly improbable that this latter was caused by the compound. One of the dogs during the tenth week when the dose was increased to 10 mg./kg. manifested neurological disturbances (involuntary twitchings).

Tetramethyl thiurem disulfide constitutes 50% of the commercial products "Thiosan" and "Ceresan". ^{Extra. Disulfide This compound is} Tetramethyl thiurem disulfide is acutely toxic when fed in concentrations as low as 60 mg. daily to guinea pigs, causing nervous and gastrointestinal disorder and eventual death. The compound is chronically toxic when fed to dogs

In doses of 3 mg./kg. body weight daily causing circulatory ^{disturbances} dis-
turbances after seven weeks of such treatment.

In the process of manufacture or use of the commercial products precautions should be exercised against the inhalation of this very toxic substance by persons exposed to heavy concentrations on single occasions, or low concentrations over a period of time.

RAB:as
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