

URINARY PARAQUAT LEVELS OF WORKERS
OCCUPATIONALLY EXPOSED TO PARAQUAT

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Paraquat is an extensively used herbicide freely available in Sri Lanka as "Gramoxone". Although the acute ill effects due to ingestion of Paraquat are well known, long term health effects have not been reported in Sri Lanka.

Studies in other countries where respiratory exposure was not higher than 0.01mg/hr., the urinary concentrations in occupationally exposed workers were often found to be lower than 0.01mg/l, but concentrations up to 0.73mg/l were determined after improper Paraquat application in tropical agricultural practices². A study done in Malaysia on formulation workers who did not adhere to safe pesticide hygiene practices showed acute skin rashes, nail damage, epistaxis, blepharitis and delayed wound healing in 12-66% of the workers².

A total of 38 workers, 29 males and 9 females, employed in 2 agrochemical firms were investigated under this study. Urinary Paraquat levels were monitored over a period of four months at regular intervals. A total of

75 urine samples were analysed using the Calderbank and Yuen (1965)³. Paraquat was detected on 59 occasions and the urinary Paraquat concentrations ranged from 0.010-0.933 mg/l. Though a correlation pattern was not established between paraquat excretion and environmental exposure, the workers continued to excrete paraquat even 48 hr. after the last exposure. Hence this method can be used to screen the workers for occupational exposure to paraquat.

References:

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