

# Adsorption of Thallium Ions by Prussian Blue

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From the report of ZITKO et al. (1975) it appears that thallium discharges into surface water may present a danger to aquatic life. This situation is not of global importance, but it may be grave enough in certain mining areas. In this context we would like to point out that HEYDLAUF (1969) has shown that the insoluble inorganic pigment Prussian Blue (potassium ferricyano ferrate (II)) adsorbs thallium ions almost quantitatively. By now Prussian Blue is the standard antidote for thallium poisoning in several European countries (KAMERBEEK et al., 1971; STEVENS et al., 1974). It works by exchanging potassium ions from the crystal surface against thallium ions. Owing to its extremely low solubility (NIGROVIC et al., 1966) Prussian Blue is not toxic. It is produced on a technical scale and might be useful in a granulated form in a percolation bed, or as sludge in basins to purify thallium containing waste water prior to discharge.

It is not up to us to judge the technical or economical feasibility of the use of Prussian Blue to this purpose. We would only like to suggest a possible way of eliminating thallium from mining waste discharges.

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