COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Copper(II) oxide; CuO; [1317-38-0] (2) Bromine; Br_2; [7726-95-6] (3) Acetonitrile; C_2H_3N; [75-05-8] (4) Methyl acetate; $C_3H_6O_2$; [79-20-9]	Busheina, I. S.; Headridge, J. B. *Analyst* 1981, *106*, 221-6.
VARIABLES: Method of determining the solubility at 25°C.	**PREPARED BY:** T. P. Dirkse

EXPERIMENTAL VALUES:

Solubility of CuO in organic solvent-bromine mixtures at 25°C.

	acetonitrile-bromine		methyl acetate-bromine	
	refluxing	no refluxing	refluxing	no refluxing
C_{Cu}/g per 100 ml	0.23	0.11	0.21	0.02
C_{Cu}/mol dm^{-3} [a]	0.036	0.017	0.033	0.003

[a] The mol dm^{-3} values were calculated by the compiler.

The purpose of this study was to determine the feasibility of using organic solvent-bromine mixtures for removing inclusions from metals.

AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

The solvents consisted of 10 vol of organic material plus one vol of Br_2. Two methods were used: (a) Without refluxing. 300 mg of CuO was added to 30 ml of solvent and after the reaction had subsided, another 300 mg portion of CuO was added. This was continued until all noticeable reaction stopped. The mixture was then shaken mechanically for 15 min and placed in a thermostat at 25°C overnight. It was filtered through a Whatman Glass microfiber paper, Type GF/F. A sample of the filtrate was evaporated to dryness, the residue dissolved in acid and analyzed by means of atomic absorption spectrophotometry. (b) With refluxing. If no reaction was observed when the CuO was added to the solvent, the mixture was heated under reflux for 30 min and then allowed to cool (1).

SOURCE AND PURITY OF MATERIALS:

All materials were of reagent grade quality. The solvents were subjected to an additional purification procedure.

ESTIMATED ERROR:

No details are given.

REFERENCES:

1. Busheina, I. S.; Headridge, J. B. *Analyst* 1980, *105*, 600.