

✓ STUDIES WITH THE ANALYTICAL SPECIES FORMED BETWEEN MOLYBDENUM (VI) AND PHENYL HYDRAZINE

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The chromogenic species formed by reaction of Molybdenum (VI) with phenyl hydrazine was found to be extractable into butanol. Optimum pH of extraction was found to be 3-4 with an enhanced molar absorptivity at 520 nm of $2.59 \times 10^4 \text{ l mol}^{-1} \text{ cm}^{-1}$ as compared to an aqueous ethanolic solution of $1.65 \times 10^4 \text{ l mol}^{-1} \text{ cm}^{-1}$. Beer's law is obeyed in the range 1.0 - 10.0 $\mu\text{g Mo cm}^{-1}$. A procedure for estimation of Molybdenum in algae is described.

Absence of reaction with reduced Mo(VI) using a Jones reductor confirmed the role of Mo(VI) as an oxidant. The nature of this analytical species is discussed.

Spot test for Mo useful in field estimations, is described using filter paper discs. The method was shown to work satisfactorily in the range 10-100 ppm of Mo.