

# PERCH Conference I

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# PERCH

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## CIP-P7

## Spectrophotometric Study of Complex between Silver (I) Ion and Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo]

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### Objective

To synthesize the Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] and investigation its property to form complex with silver (I) ion.

### Methods

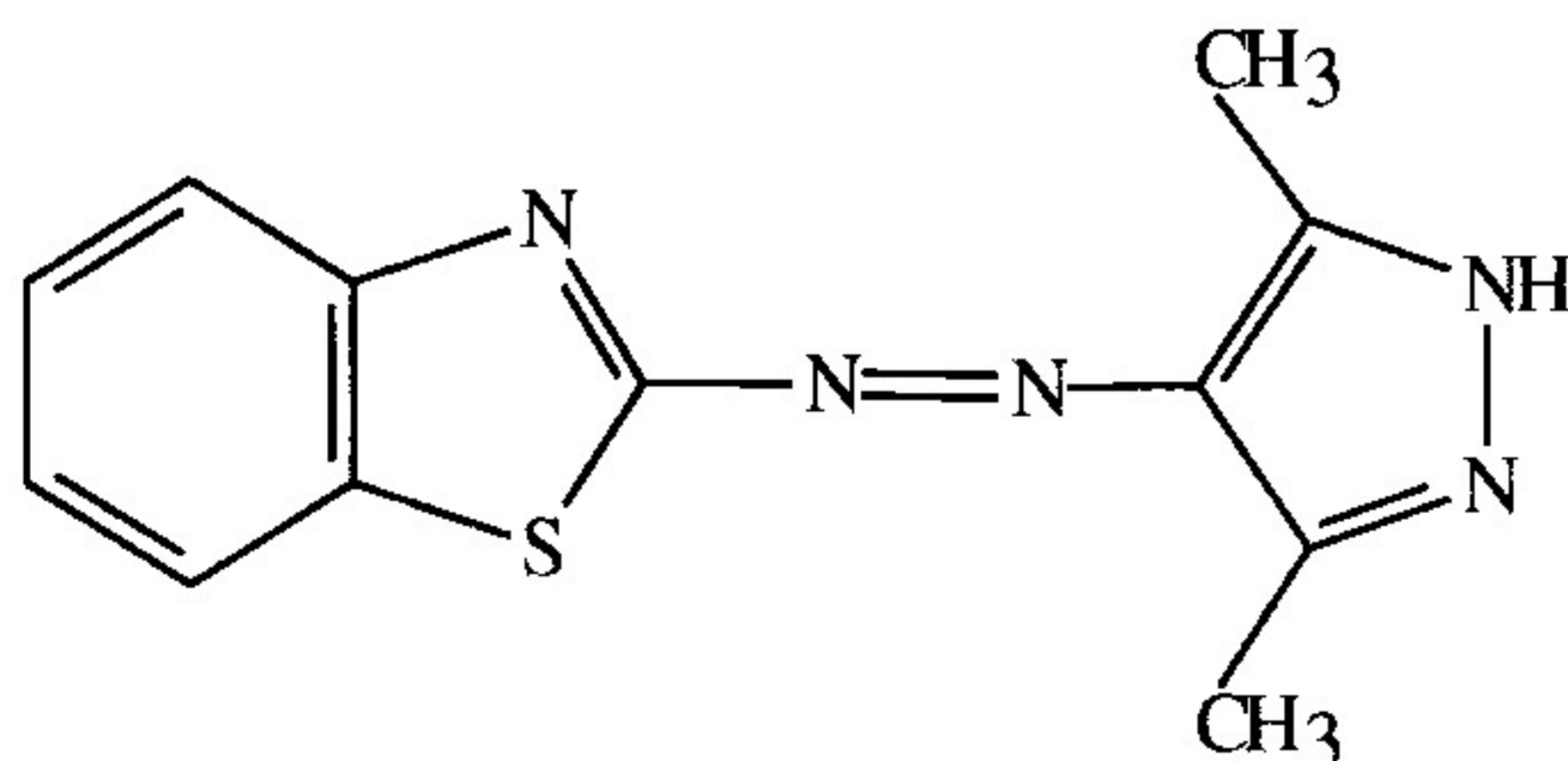
Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] was synthesized by the coupling reaction between 2-aminobenzothiazole and 3,5-dimethylpyrazole. Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] was characterized by spectrophotometric methods. The ability in forming complex with silver (I) ion in solution was investigated at various pH.

### Result

The Infrared spectrum (IR), Nuclear Magnetic Resonance spectrum (NMR), and Mass spectrum (MS) of Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] were obtained. The visible spectra of the mix solutions between silver (I) ion and Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] indicated that the silver (I) complex was formed.

### Conclusion

Benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo] which has ability to form complex with silver (I) ion was synthesized.



**Keywords:** silver (I) complex, benzothiazole, 2-[(3,5-dimethyl-1H-pyrazol-4-yl)azo]

### Selected references:

1. Liu, B., Gao, H., Liu, J., & Zhou, X., (1994). *Hangzhou Daxue Xuebao, Ziran Kexueban*, , 21(1), 63-67.
2. Ma, W., Chen, H., Bu, R., Wang, Z., & Wang, J., (2000). *Huaihai Gongxueyuan Xuebao*, , 9(3), 50-53.