Arnow Test for Catecholate-Type Siderophores

Dr. Steven Wilhelm

Abstract

Please contact Dr. Steven Wilhelm (wilhelm@utk.edu) for additional information regarding this protocol.

Adapted from Arnow, L. E. Colorimetric determination of components of 3,4-dihydroxyphenylalanine-tyrosine mixtures. *J Biol Chem* **118**, 531-537 (1937).

Citation: Dr. Steven Wilhelm Arnow Test for Catecholate-Type Siderophores. **protocols.io** dx.doi.org/10.17504/protocols.io.icpcavn
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Protocol

Step 1.

Bring 100 µL siderophore sample to 1 mL final volume with Milli-Q H_2O

Step 2.

Add 1 mL of reagent 1 (0.5 N HCl) and mix

AMOUNT
1 ml Additional info:

Step 3.

Add 1 mL of reagent 2 (10 g $NaNO_2$, 10 g Na MO in 10 mL ultrapure, Chelex-100 treated H_2O) and mix

AMOUNT
1 ml Additional info:

NOTES
Alyssa Alsante 07 Jun 2017

Omit this step for a blank sample.

Step 4.

Add 1 mL of reagent 3 (1 M NaOH) and mix

AMOUNT

1 ml Additional info:

Step 5.

Add 1 mL H_2O and mix

AMOUNT

1 ml Additional info:

Step 6.

Allow 10-40 min for color reaction, and read in spectrophotometer at 500 nm

DURATION

00:40:00

Step 7.

For a standard curve, use DHBA (dihydroxybenzoic acid)