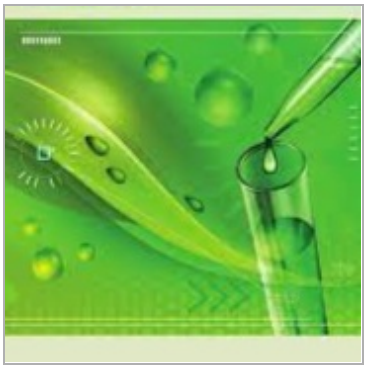

FEB 27, 2023

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.e6nvwj27wlmk/v1

Protocol Citation: Matin Mahmood, Abdulkareem Hameed Abd, Enas Jawad Kadhim 2023. Preliminary qualitative phytochemical analysis. **protocols.io** https://dx.doi.org/10.17504/protocols.io.e6nvwj27wlmk/v1

Protocol status: Working
We use this protocol and it's working

Created: Feb 26, 2023

Last Modified: Feb 27, 2023

PROTOCOL integer ID: 77638

Keywords: Detection of fractions, Phenolics, Terpene

Preliminary qualitative phytochemical analysis

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ABSTRACT

Plant extraction is **a process that aims to extract certain components present in plants**. It is a solid/liquid separation operation: a solid object (the plant) is placed in contact with a fluid (the solvent). The plant components of interest are then solubilized and contained within the solventChemical tests were carried out using the ethanolic extracts from plants and different fractions, using standard procedures to identify the active constituents

MATERIALS

I.**Alkaloids test**:
HCL (Sigma-Aldrich cat-no. 1009861000)
Mayer's (1.35gm mercuric chloride (Sigma-Aldrich, Germany ca-no. 215465) in 60ml water + 5gm potassium iodide (Sigma-Aldrich, Germany cat-no. 221945) in 10ml water)
Wagner's reagents (1.27g of iodine (Sigma-Aldrich, Germany cat-no. 1047630050)

II.Flavonoids tests
a.Lead acetate test: lead acetate solution (BDH limited, England cat-no. LL0093)
b.NaOH test: NaOH and HCl

III.Steroids tests
sulfuric acid (BDH limited, England cat-no. BDH3068-500MLP)

IV. Terpenoids test (Salkowski test):
chloroform (Honeywell, USA cat-no. C2432)
sulphuric acid (BDH limited, England cat-no. BDH3068-500MLP) w

Test for alkaloids

1 Ten (2ml) of alcoholic extract and fractions were stirred with 5 ml of 1% HCL on a steam bath.

2 Mayer's (1.35gm mercuric chloride in 60ml water + 5gm potassium iodide in 10ml water)and Wagner's reagents (1.27g of iodine and 2g of potassium iodide in 100ml of water) were added, white and reddish brown color precipitate respectively, were taken as evidence for the presence of alkaloids

Test for flavonoids

3 Two tests used for detection of flavonoids

3.1 **Lead acetate test:** to 2ml of alcoholic extract and fractions, 1ml of 10% lead acetate solution was added. The formation of a yellowish- white precipitate was taken as a positive test for flavonoids

3.2 **NaOH test**: 2ml of the extract and fractions were treated with aqueous NaOH and HCl, and looking for the formation of a yellow orange color

Tests for steroids

4 Two tests used for identification of steroids

4.1 **Liebermann-Burchard test**: 2ml of the extract and fractions were treated with chloroform, acetic anhydride and drops of sulphuric acid was added. The formation of dark pink or red color indicates the presence of steroids

4.2 **H_2SO_4 test**: The development of a greenish color was considered as indication for the presence of steroids, when 2 ml of the extract and fractions were treated with sulphuric and acetic acids.

Test for terpenoids

5 Two ml of the organic extract and fractions were dissolved in 2 ml of chloroform

6 Evaporated to dryness

7 2 ml of concentrated sulphuric acid was then added and heated for about 2 min. A grayish color was considered an indication for the presence of terpenoids.