

Phytochemistry of *Oxalis corniculata* L.

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Article Info

Received: 10-02-2026,

Revised: 07-03-2026,

Accepted: 20-03-2026

Keywords: Phytochemistry, Medicinal uses. *Oxalis corniculata* L

Abstract

Oxalis corniculata L. shrub plant belongs to Family Oxalidaceae in India. It is used as complementary medicine in wound healing, anemia, dyspepsia, cancer, dementia and convulsions (Taranalli et al., 2004; Madhavachetty et al., 2008). The present work of GC-MS results of whole plant powder extract of *Oxalis corniculata* The results revealed that the presence of n- hexadecanoic acid, 9,12,15-Octadecadienoic acid, proline, 5-oxo,methyl ester, Butyl-9,12,15-octadecatrienoate, Butyl-9,12,15-octadecatrienoate, Methyl ester The present study useful to find drug of *Oxalis corniculata* L.

INTRODUCTION

This plant is well known for its medicinal value as a good appetizer and as a remover of kapha, vata and pitta. It is used in Siddha preparations like Uppuchenduram which is used in the treatment of pitta disorder colic, burning sensation of the chest, hyper acidity, indigestion and menstrual disorders (Anonymous, 1972). It is rich in niacin, vitamin C and β -carotene (Manandhar, 2002). It is used as complementary medicine in wound healing, anemia, dyspepsia, cancer, dementia and convulsions (Taranalli et al., 2004; Madhava Chetty et al., 2008). It is used as complementary medicine in wound healing, anemia, dyspepsia, cancer, dementia and convulsions (Taranalli et al., 2004; Madhavachetty et al., 2008). It is anthelmintic, anti-inflammatory, astringent, depurative, emmenagogue, febrifuge, lithotriptic, stomachic and styptic. It is also used in the treatment of influenza, fever, urinary tract infections, enteritis, traumatic injuries and sprains (Chopra et al., 1986).

MATERIALS AND METHODS

The plant was collected from Ch. Sambhaji Nagar Maharashtra state The plant was authenticated (Naik, 1998: Hooker, 1874) and voucher specimen was deposited at Vivekanand Arts, Science College

Sardar Dalipsingh Commerce and Science college, Ch. Sambhaji Nagar Maharashtra state.

Phytochemical Study

For phytochemical study plant extracts were prepared by Soxhlet extraction.

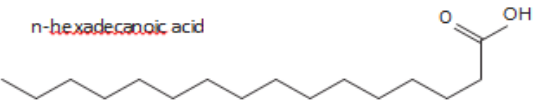
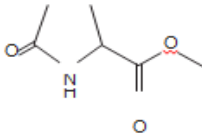
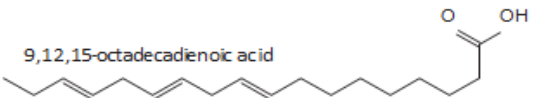
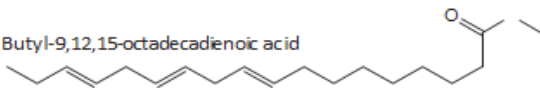
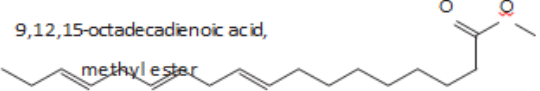
Preparation of extract

25-gram plant powder of powder of *Oxalis corniculata* L. was extracted with methanol solvent using soxhlet extractor for 18 hours at 65 °C. The extracts were filtered through a Whatman filter paper no. 42 (125 mm) and concentrated at 40 °C by using an evaporator and stored in amber color bottle at 4°C. These extracts were sent to Sophisticated Analytical Instrumentation Facility, Indian Institute of Technology Bombay, Powai Mumbai, India. For GC-MS (Gas chromatography mass spectroscopy) for detection of phytochemicals.

GC-MS analysis

For each sample Injection port temperature is 250, Carrier gas is Helium 1ml /sec. Inter face temperature is 250, Ion source is at 200, Analysis was done by using E+ ionization with 70ev, The MS is Accu TOF GCV, Column through the sample passes is HP-5. The MS detection was completed in 36 minutes. The detection employed the NIST Ver. 2.0-year 2005 library.

RESULT AND DISCUSSION

Name of compound	Structure of compound	Retention time	Molecular formula	Molecular weight
n-hexadecanoic acid		19.8	C ₁₆ H ₃₂ O ₂	256.24
Proline, 5-oxo, methyl ester		11.4	C ₆ H ₉ O ₃ N	143.21
9,12,15-octadecadienoic acid		22.1	C ₁₈ H ₃₀ O ₂	278.55
Butyl-9,12,15-octadecadienoic acid		22.1	C ₂₂ H ₃₈ O ₂	334.28
9,12,15-octadecadienoic acid, methyl ester		21.6	C ₁₉ H ₃₂ O ₂	292.88

The results pertaining to GC-MS analysis led to the identification of number of compounds from the GC fractions of the Methanolic extract of *Oxalis corniculata* L. These compounds were identified through mass spectrometry attached with GC. The results of the present study were tabulated in The compound prediction is based on Dr. Duke's Phytochemical and Ethnobotanical Databases. The results revealed that the presence of n-hexadecanoic acid, 9,12,15-Octadecadienoic acid, proline, 5-oxo,methyl ester, Butyl-9,12,15-octadecatrienoate, Butyl-9,12,15-octadecatrienoate, Methyl ester.

CONCLUSION

In the present study we characterized the chemical profile of *Oxalis corniculata* L. using GC- MS. This report is the first of kind to analyze the chemical constituents of *Oxalis corniculata* L. using GC-MS. In addition to this, the results of the GC-MS profile can be used as Pharmacognostic tool for the identification of the plant.GC-MS analysis showed the existence of various compounds with different chemical structures. The presence of various bioactive compounds confirms the application of *Oxalis corniculata* L. for

various ailments by traditional practitioners. However, isolation of individual phytochemical constituents may proceed to find drug.

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