

## A POTENTIAL WILD CONSUMABLE PLANT BY HPTLC: REVIEW

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### ABSTRACT

HPTLC technique was produced for the quantitative estimation of gallic acid, rutin and quercetin from metabolic concentrate of *Portulacaquadrifida* L. a potential wild consumable plant. Precoated silica gel GF254 utilized as stationary stage and portable stage for gallic corrosive was Toulene: Formic corrosive: Ethyl acetic acid derivation: Methanol [3:3:8:2, V/V/V/V] and Versatile stage for rutin and quercetin was Ethyl Acetic acid derivation: Formic corrosive: Frigid Acidic corrosive: Water [10:0.5:0.5:1.3, V/V/V/V]. Location and measurement were performed densitometrically at wavelength  $\lambda$  254. The Rf estimations of gallic corrosive, rutin and quercetin are 0.41, 0.19 and 0.94 separately. The aggregate pinnacle regions of the gauges (gallic corrosive, rutin and quercetin) and the relating crest ranges of concentrate were analyzed and the gallic corrosive, rutin and quercetin substance were assessed to be 790.9, 2029.7 and 4326.0.

**Keywords:** HPTLC, Nutraceuticals, *Portulacaquadrifida* Wild Consumable Plant

### INTRODUCTION

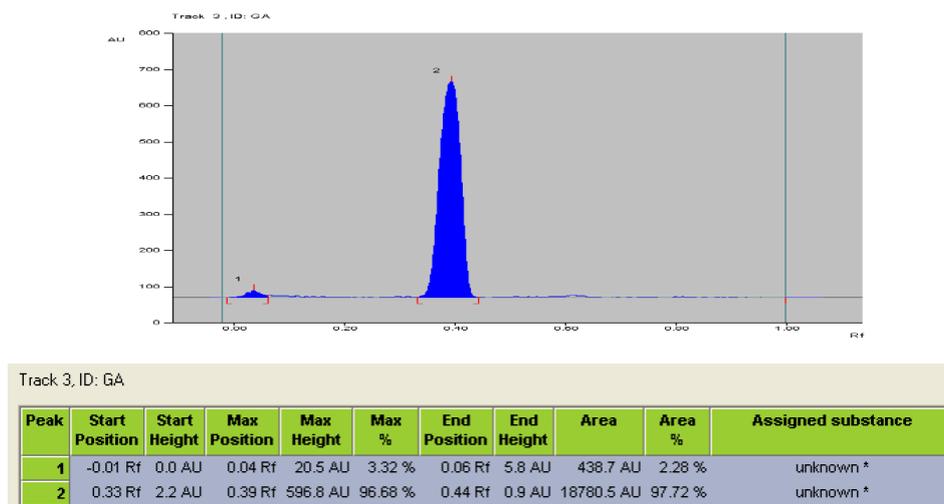
*Portulacaquadrifida* L. is a little diffused, succulent yearly herb found all through the tropical piece of India. It is said to be helpful in asthma, hack, urinary releases, irritations, and ulcers, stomach objections (Kirtikar and Basu, 2001). It has been accounted for to have antifungal movement (Hoffman et al., 2004). Plant demonstrates hostile to diabetic properties (Khatun et al., 2015). Crisp leaves of *P. quadrifida* slightly wormed and connected topically in joint swelling (Abbasi et al., 2013), It indicates depressant impact of ethanolic concentrate on CNS (Syed et al., 2010). The leaves and delicate shoots of plant are cooked as vegetables by tribal and neighborhood people groups in Maharashtra and rest a portion of India (Reddy 2012; Naik 1998; Raphael and Britto 2015). Wild palatable plants assume a vital part in the eating regimen of tribal groups. They are real

wellspring of nourishment for tribals of timberland ranges. Palatable parts of wild plants are promising endowment of nature to humankind, these are scrumptious and reviving as well as the main wellspring of vitamins, minerals, proteins and different supplements. "Nutraceutical" the term authored in 1979 by Stephan De Felice. It is planned as a sustenance or parts of nourishment that give restorative or medical advantages, including the aversion and treatment of sickness (De Felice 1992 ). Nutraceutical may extend from segregated supplements, dietary supplements, natural items and handled items. Nutraceutical assume imperative part in physiological advantages or give security against the infections (Rajsekar et al., 2008). The major nutraceutical fixings in plant are phenolic mixes for the most part Flavonoids (Tapas et al., 2008). Gallic corrosive (3, 4, 5,- tryhydroxybenzoic corrosive) is normally happening polyphenolic mixes groups astringent, antioxidative, antimicrobial movement (Sovereign et al., 2009, Urizziet al., 1999, Vermaet al., 2013). They likewise constitute an unavoidable part of the eating routine. Rutin and quercetin are phenolic mixes show antiulcer, mitigating, cancer prevention agent, antimicrobial, antiallergic action (Agnes et al., 2008, Maaliket al., 2014, Gupta et al., 2014, Singh and Bilashini 2015). They have indicated administrative action of hormones, for example, transport, digestion system and activity of thyroid hormones (Ashok et al., 2010). Elite slight layer chromatography (HPTLC) has developed as a valuable logical strategy for subjective and quantitative estimation of compound constituents present in plant materials (Sethi, 1996). Present study manages estimation of critical nutraceuticals and cancer prevention agents like gallic corrosive, quercetin and rutin in *Portulacaquadrifida*L. by HPTLC strategy.

#### **MATERIAL AND STRATEGIES PLANNING OF CONCENTRATE**

The ethereal piece of wild palatable plant *Portulacaquadrifida*L. were gathered from various parts of Nanded area. The plant was recognized and validated. Consumable piece of plants were dried and made into coarse powder and put away in fixed compartment. Powder then removed with methanol by Soxhlet device and concentrated. Reagents and different

materials Gallic corrosive, rutin and quercetin [Sigma Aldrich] toluene, formic corrosive, ethyl acetic acid derivation, methanol, cold acidic corrosive, [all reagents of explanatory evaluation, E-Merck] and silica gel F254 TLC aluminum plates [E-Merck]. Arrangement of standard and test arrangements Gallic corrosive, rutin and quercetin 10mg were precisely measured into 10mL volumetric flagon broke down in 10 mL of methanol [1mg/mL]. The 100 mg of concentrate was broken down in methanol [10mL] then arrangement was sifted through whattman channel paper No. 42. Improvement of HPTLC System The specimen were seen as groups with small scale liter syringe on pre-covered silica gel plates F254 [10 cm x 10 cm with 0.2 mm thickness] utilizing CAMAG Linomat 5 utensil programmed test spotter of band width 6mm. The plates were created in a dissolvable framework in CAMAG glass twin through chamber already immersed with the dissolvable for 30 min. The separation was 8 cm resulting to the examining, TLC plates were air dried and filtering was performed on a CAMAG TLC Scanner in absorbance at 254 nm and worked with win Felines Planar chromatography Director. Gallic corrosive estimation in *P. qudrifida* L. Stationary stage silica gel F254 plates, Versatile stage Toulene: Ethyl acetic acid derivation: Formic corrosive: Methanol [3:3:8:2 v/v/v/v/v], standard Gallic corrosive 1 mg/ml [5 µl], test Methanol remove 10mg/ml [10 µl], Relocation separation 80 mm, checking wavelength 254 mm, Method of examining Ingestion [deuterium]. Rutin and Quercetin estimation in *P. quadrifida* L. Stationary stage silica gel F254 plates, Versatile stage Ethyl acetic acid derivation: Formic corrosive: Frosty acidic corrosive: Water [10:0.5:0.5:1.3 v/v/v/v/v], standard Rutin and Quercetin 1 mg/ml [5 µl], test Methanol remove 10mg/ml [10 µl], Movement separation 80 mm, checking wavelength 254 mm, Method of filtering Assimilation [deuterium].



**Figure 1: HPTLC Profile for Gallic acid standard**

## CONCLUSION

HPTLC Examination of *P. quadrifida* shows great centralization of gallic corrosive, quercetin and rutin which demonstrates its cancer prevention agent nature. The consequences of present study bolster its eatable nature and it could be potential wellspring of nutraceutical and characteristic cancer prevention agent.

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