

BABE 2018 Liquid–Liquid extraction method developed for thymoquinone from seed powder of *Nigella Sativa*, Characterized it by UV-Spectrophotometer.- Mohamad Taleuzzaman, Glocal University

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Nigella Sativa Linn. (Ranunculaceae) (*N. sativa*), commonly known as black seed or black cum-in, is an herbaceous plant. Liquid–Liquid extraction method developed, the seed powder *Nigella sativa* was packed in a muslin cloth and placed in a beaker containing sufficient quantity of methanol for 72 hrs. Thereafter the methanolic extracts were filtered through Whatman filter paper no. 42 and the resultant filtrates were concentrated under reduced pressure using rotary evaporator. Characterize by UV-Spectrometer. The λ_{max} of thymoquinone is found 254 nm and confirm it by pure compound of thymoquinone. The accuracy of recovery studies by the standard addition technique was carried out by adding 50, 100 and 150% of the thymoquinone concentration in the sample. The % recoveries of the three concentrations were found to be (99.95–101.68) & % RSD (1.63-1.02). The precision method was assessed by analyzing thymoquinone in three different concentrations as 10, 25 and 40 $\mu\text{g mL}^{-1}$ of thymoquinone. Repeatability (intra-day) was assessed by analyzing thymoquinone in three different concentrations (10, 25 and 40 $\mu\text{g mL}^{-1}$) three times a day the % RSD (1.83-0.91). Intermediate precision (inter-day) was established by analyzing three different concentrations (10, 25 and 40 $\mu\text{g mL}^{-1}$) of thymoquinone for three different days. % RSD (1.85-0.93). The low values of % RSD for repeatability and intermediate precision suggested an excellent precision of the developed UV spectrophotometric method. The optical, linear regression and validation data of UV spectrophotometry for the quantification of thymoquinone in methanol-Optical characteristics $E_{1\%}^{1\text{cm}}$ (201.82 \pm 2.43). Regression analysis-Slope

(0.0204 \pm 0.0002), Intercept(0.0062 \pm 0.0012), Regression coefficient(R^2) (0.9984 \pm 0.0003), Validation-Range (5-50 $\mu\text{g mL}^{-1}$), Detection limit (DL)(0.99 $\mu\text{g mL}^{-1}$), Quantitation limit (QL) (2.89 $\mu\text{g mL}^{-1}$).

Discussion: In dietary routine, phytonutrients-based items/mediations have ability to give insurance against the plenty of ailments inferable from their capacity of forestalling oxidative pressure. There are demonstrated realities that clarify the reverse relationship of metabolic conditions and phytochemical utilization. Among the various devices of dietary intercession, polyphenols have accomplished vital potential inferable from their remedial potential. The results of various examinations have demonstrated helpful effect of polyphenol rich eating regimen against various oxidative pressure actuated illnesses inferable from their free radical searching viewpoint. Flavonoids and phenolic mixes are generally conveyed among the greenery populace and demonstrated different organic impacts, including mitigating, against cancer-causing exercises, and so forth. The relationship between the antioxidative properties of food and wellbeing has as of late been widely researched. Regular cell reinforcements are likewise popular for application as nutraceuticals/utilitarian nourishments and biopharmaceuticals as a result of buyer inclinations and their restorative impact. The helpful job of plant-based products against lipid peroxidation has been set up through numerous logical investigations; upholding the significance of a higher utilization of phytochemicals in the advancement of wellbeing. A living being may ensure itself against free radicals with the assistance of different cell rein-

forcement resistance systems in the body, including both exogenous and endogenous sources. The models for exogenous incorporate β carotene nutrient C, E, though catalase and glutathione peroxidase/reductase speak to the endogenous sources. In late time, the poor dietary propensities and inactive way of life trigger to the beginning of oxidative pressure that requests higher exogenous cell reinforcement utilization to enhance its deteriorative outcomes. A few late epidemiological investigations delineate critical positive relationship between's the utilization of plant-determined nourishments and decreased occurrences of maladies like maturing, malignant growth, coronary illness, and Alzheimer's infection. In this unique situation, flavors have increased foremost consideration of academic network as cancer prevention agent rich wares attributable to their prominence and flexible usage. The flavors lipid peroxidation reducing point of view has been credited to their rich phytochemistry commanded by polyphenols. Among the flavors, BCS, FS, and CS are generally used for the culinary purposes as well as people medication against various afflictions. The bioactive

mixes from flavors could be separated and detached through the dissolvable extraction strategy by utilizing natural solvents or water. A few examinations have uncovered that the removed phytochemicals have shown a broad scope of natural properties inferable from their in vitro and in vivo cancer prevention agent potential. No uncertainty, broad work has just been done on the flavors extraction and portrayal, yet the exploration on their synergistic job has been inadequate. This viewpoint has extraordinary mechanical application as their blend is legitimately connected to their customer agreeableness. Besides, in Pakistan the logical research in this perspective on flavors has not been generally investigated. Hence, the prime target of momentum inquire about is to explore the impact of various solvents on the extraction effectiveness of the flavors polyphenols alone and in blend and their broad cancer prevention agent profiling through various records. Moreover, HPLC portrayal was likewise completed for the estimation of dynamic fixings.