Review of Literature.
After review of literature it was found that the cannabis has been analysed for its various constituents like Tetrahydrocannabinol, Cannabionial (CBN), cannabidiol etc. In recent years it has been found possible to obtain these substances from Indian cannabis resin. These constituents were analysed by using various chemical and instrumental techniques or methods like colour test, thin layer chromatography, visual and colour differentiation of cannabis samples their ash by natural and ultra violet light.

Cannabis sativa is one of the plants about which much has been worked and written. This is one of the earliest plants associated with man. The plant has south-east Asian origin and is well recognized in India since the Vedic period. However, much lesser work has been done in India one of the putative origin as compared to works done in European countries as well in China.


Morphology of a plant includes parameters from external features of a plant to the cell structure. However, as compared to the global significance of the plant lesser works have been done on the morphology of Cannabis sativa. Some of the works on morphology include Anderson (1974, 1976), Andre (1976), Bouquet (1950), Breslavetz (1935), Clarke (1977), Molotkovskii and Butnitskii (1971), Quimbi (1975), Richardson (1976), Small (1972). These morphological studies include the studies on general features of the plant as well as on the trichomes and glands of the plant. Anatomy, a part of morphology of a plant has been worked out for C. sativa by Fahn (1967) Furr
Epidermal outgrowths as glands, trichomes and hairs cover the entire aboveground part of the plant, however, their distribution is different in different parts of the plant as well as varies to some extent in different varieties. The alkaloid of notoriety is synthesized and stored in the structures called glands. Some of the workers investigating these structures are Dayanandan & Kaufman (1976), De Pasquale, A. (1974), De Pasquale et al. (1974), Fairbairn (1973), Hammond & Mahalberg (1973, 1977, 1978), Kim & Mahalberg (1991, 2003), Lanyon et al. Ledbetter & Krikorian (1975), Levin (1973), Mahalberg et al. (1984) and Turner et al. (1980, 1981) etc.


After review of literature it was found that the opium has been analyzed for its various constituents Narayanaswami, K (1979), like alkaloid, amino acid, fatty acid, inorganic and organic acids content, elemental and crystal/particle classification and their sizes etc., for their characterization to determine the origin of opium ST/SOA/SER.K.1-149, (1951 to 1957). These constituents were analyzed by using various chemical and instrumental techniques/ methods like colour tests Baggesgaard Rasmussan, et al. U.N. Secretariat, ST/SOA/SER.K/** (1958-1967), thin layer chromatography and spectrophotometry Nouri Y Mary (1963), visual and color differentiation of opium sample and their ash by natural and ultraviolet light, emission spectrographic methods Evans, Jermstad, (1966,1958), emission spectrographic
methods and flame photometry Bartlet, (1954), paper chromatography Panopoulos (1954-1957), paper electrophoresis Farmilo, (1957) gas chromatography Eddy, Baerheim Svendsen, Martin, Lane, Svendsen (1961, 1963, 1964, 1965). The ratio of its constituents was also studied for the characterization of opium e.g., Narcotine to meconic acid Svendsen, Nicholls (1965, 1951), Codeine plus narcotine to morphine Martin, (1964). Further more, meconic acid; sulfuric acid and total acid contents were also used for determination of the origin of opium Nicholls (1951). For the determination of origin of opium, microscopic examination and classification of crystals have also been studied for the purpose Nicholls, Merlis, (1951, 1962). Extraction of opium samples with a buffer at pH 3.95 Martin, (1964) and its consequent study for the extinction coefficient extracts at 260, 270, 280, 290, 300 and 310 nm and differentiating their ratios to correlate them to origin determination. Attempts have been made to determine the several opium alkaloids from the same extract in a unified method. These are based on classical partition and precipitation methods Akcasu. ST/SOA/SER.K/21, (1951, 1953).