PREPARATION OF “777 OIL” USED FOR PSORIASIS IN SIDDHA MEDICINE BY MODIFIED METHOD

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ABSTRACT: “777 oil” a coded drug of Siddha system of medicine was prepared and analyzed in the paper. The drug showed 3.62, 13.57 and 266.9 Iodine value, acid number and saponification number respectively. The bark which was one of the ingredients in the drug was possessing 0.63% nitrogen in the acid soluble portion. The bark also exhibited proeolytic activity and the optimum pH was 4.

Introduction.

The “777 oil” a coded drug on Siddha system of medicine is derived from the leaves of *Wrightia tinctoria* by insolation with coconut oil as base. This process of preparation in the siddha medicine is called “Sooriya Pudam”. Alam et al have prepared the medicine by Sooriya Pudam method and have reported its analytical values (Alam et al 1986).

A modification was made in the preparation of the drug by employing the bark of *Wrightia tinctoria* instead of leaves. The other conditions were the same as mentioned earlier (Alam et al 1985, 1986). The analytical values of this drug are communicated in this paper. The bark is also reported to possess proteolytic activity is quantitatively determined and compared with that of leaf.

Materials and Methods.

The bark was collected from the medicinal plants garden of the Central Research Institute for Siddha, Madras Amul milk powder (Kaira Disatric Co-operative Milk Producers Union Ltd., Anand 388001) was bought from the local market.

Preparation of “777 oil”

The “777 oil” from bark was prepared according to siddha system of medicine.

Analytical studies.

The fresh bark was cut into small pieces of 1 to 2 cm. in length and were shade dried for 2 days. The shade dried bark was analyzed for ash and acid soluble ash as per procedure described in AOAC (Horwitz, 1980), Calcium and Iron were estimated as per the method detailed by Welcher (1965) and Vogel (1961) respectively.

The “777 oil” was analyzed for saponification value, iodine and acid number as described earlier (Alam et al 1985). The nitrogen and protein were
estimated as per the procedure given in ‘Methods in Enzymology’ (Colowick and Kaplan 1953).

**Chromatography**

Silica gel thin layer chromatography of the ‘777 oil’ was carried out in the solvent Ethyl acetate: Benzene : 2:3. The chromatograms were developed with iodine vapours and sulphuric acid water (1:1) The plates after spraying with sulphuric acid were treated in hot air oven at 110° C for 10 minutes.

**Preparation of bark extract**

The fresh bark was cut into small pieces (0.25 × 0.5 cm) and was ground with glass powder (1 : 10) in an ice bath. The ground mass was extracted with 2 volumes (W/V) of 0.2 M phosphate buffer pH 7. The solution was centrifuged at 6000 r. p.m. for 20 minutes at 4° C. The yellowish brown supernatant was collected and labeled as bark extract.

**Assat of proteolytic activity**

The proteolytic activity was assayed as described earlier (Alam et al 1986). The units of enzyme were the same as reported earlier (Alam et al 1986).

**pH profile**

The pH profile was studied in 0.2 M buffers of pH 3 o 6 as detailed earlier (Alam et al 1986).

**RESULTS AND DISCUSSION**

The colour of “777 oil” prepared form bark was brown. The saponification value, acid and iodine number were 266.9, 13.57 and 8.62 respectively (Table – 1).

| Parameters                  | Values |
|-----------------------------|--------|
| Iodine Value                | 8.62   |
| Acid Number                 | 13.57  |
| Saponification Value        | 266.9  |

These values were comparable to “777 oil” prepared from leaf (Alam et al 1985, 1986).

The bark analysis showed ash content 9.53% out of which 8.9% was acid soluble. The iron and calcium contents were 0.01% and 1.7% respectively. The nitrogen in the bark was 1.77% whereas in the acid soluble ash it was 0.63%. The quantity of nitrogen in acid soluble ash corresponds to 0.81% ammonium ions (Table II).

| Parameters                  | Values |
|-----------------------------|--------|
| Ash                         | 9.53   |
| Acid soluble ash            | 8.9    |
| Acid insoluble ash          | 0.63   |
The quantity of iron and calcium in the bark were less, compared to leaf (Alam et al 1986). Nitrogen content in acid soluble ash was 0.63% whereas it was 1.01% in leaf (Alam et al 1986).

“777 oil” prepared from leaf and that prepared from bark showed equal number of spots with identical Rf values by thin layer chromatography. It indicates that chromatographically both the oils are similar.

The bark possessed proteolytic activity. The protein content of the bark was 43.1 mg/ml and that of leaf was 262 mg/ml. The specific activity of the proteolytic enzyme in bark and leaf were 1.8 and 0.2 respectively. (Table – III) The optimum pH.

### TABLE – III

| Source  | Specific activity |
|---------|-------------------|
| Leaf    | 0.2*              |
| Bark    | 1.8               |

* Alam et al (1986)

for the enzyme was 4 (Fig.1). The specific activity of proteolytic enzyme in the bark was higher than leaf but both had identical optimum pH.

![Fig.1 pH profile of proteolytic enzyme of bark and leaf of Wrightia tinctoria](image-url)
Conclusion

The “777 oil” prepared from bark showed the analytical values comparable to that prepared from leaf. It may have the same therapeutic effect as that of “777 oil” prepared from leaf.

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