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Ayurvedic medicinal oils : Selective incorporation of constituents of *Rubia cordifolia* into 'Pinda' oil

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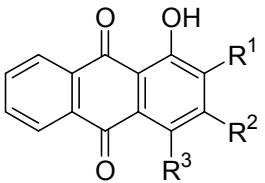
Rubia cordifolia is one of the plants used in the preparation of 'Pinda' oil, which is widely used for skin disorders. As a part of our on going studies on the chemistry, standardization and quality control of Ayurvedic drugs, 'Pinda' oil was analyzed for the constituents of roots and stems of *R. cordifolia*. For this, 'Pinda' oil of a reputed manufacturer was subjected to a series of solvent – solvent partitioning and TLC systems were developed to separate the constituents in it. Methanol extract of roots and stems of *R. cordifolia* was also partitioned and was further fractionated to isolate the major constituents. This led to the isolation of rubiadin (**1**), xanthopurpurin (**2**), munjistin methyl ester (**3**), purpurin-2-methyl ether (**4**), 2-methyl-1-hydroxy-9,10-anthraquione (**5**) and β-sitosterol, while two other common anthraquinones, alizarin (**6**) and purpurin (**7**) were isolated from alum solutions obtained from *R. cordifolia* soaked in HCl. Identification of these compounds was done by their melting points, UV, IR, LC-MS, and NMR data. The TLC comparisons of fractions of 'Pinda' oil and the compounds isolated from roots and stems of *R. cordifolia* showed that, out of the seven anthraquinones, only four i.e. (**1**), (**2**), (**6**), (**7**) and β-sitosterol have been incorporated into 'Pinda' oil.



- R^1= CH_3, R^2=OH, R^3=H, rubiadin
- R^1= R^3=H, R^2=OH, xanthopurpurin
- R^1= $COOCH_3$, R^2=OH, R^3=H, munjistin methyl ester
- R^1= R^3=OH, R^2=OCH_3, purpurin 2methyl ether
- R^1= CH_3, R^2=R^3=H, 2-methyl-1-hydroxy-9,10-anthraquinone
- R^1= OH, R^2=R^3=H, alizarin
- R^1= R^3=OH, R^2=H, purpurin

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