

BRIEF COMMUNICATIONS

COUMARINS OF *Heracleum pastinacifolium*

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The coumarin content of pasternak parsnip (*Heracleum pastinacifolium* C. Koch., Apiaceae L.) roots collected during fruiting (end of June) near the village Kyu-Kyu of Nakhichevan Autonomous Republic in Azerbaijan was studied.

Ground air-dried roots were extracted three times (3 days each) with acetone. The acetone was filtered and distilled off. The solid was a dark brown resin. It was chromatographed on a polyamide column (60×2 cm) with elution by 10-60% aqueous acetone [1] and acetone. The volume of each fraction was 50 ml. Fractions consisting of two and more substances were repeatedly rechromatographed to give six crystalline coumarin-like substances [2, 3]:

- 1, C₉H₆O₃, mp 230-232°C, ν_{\max} 3250, 1703, 1682, 1636, 1585, 1520 cm⁻¹;
- 2, C₁₂H₈O₄, mp 188-191°C, ν_{\max} 1720, 1683, 1632, 1615, 1580, 1535 cm⁻¹;
- 3, C₁₂H₈O₄, mp 223-225°C, ν_{\max} 1735, 1650, 1630, 1554, 1500 cm⁻¹;
- 4, C₁₂H₈O₄, mp 190-192°C, ν_{\max} 1730, 1637, 1620, 1515, 1500 cm⁻¹;
- 5, C₁₃H₁₀O₅, mp 116-118°C, ν_{\max} 1727, 1635, 1580, 1533 cm⁻¹;
- 6, C₁₃H₁₀O₅, mp 149-151°C, ν_{\max} 1740, 1633, 1625, 1542 cm⁻¹.

Comparison of the physicochemical properties of the isolated compounds with those of known coumarin derivatives and chromatography on Silufol plates with authentic samples identified them as umbelliferone, bergapten, isobergapten, sphondin, pimpinellin, and isopimpinellin, respectively [2, 3].

REFERENCES

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