

# Determination of Usnic Acid in Some *Rhizoplaca* Species from Middle Anatolia and their Antimicrobial Activities

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Three species of lichens, *Rhizoplaca chrysoleuca* (Sm.) Zopf, *Rhizoplaca melanophthalma* (DC.) Leuckert & Poelt and *Rhizoplaca peltata* Ramonds Leuckert, were collected from middle Anatolia, Erciyes Mountain (Kayseri) in Turkey. Their usnic acid amounts were determined by HPLC in acetone extracts. In addition, antimicrobial activities of these extracts were determined against *Escherichia coli* (ATCC 35218), *Enterococcus faecalis* (RSKK 508), *Proteus mirabilis* (Pasteur Ens. 235), *Staphylococcus aureus*, *Bacillus subtilis*, *Bacillus megaterium* and *Pseudomonas aeruginosa*. It was shown that, as the usnic acid amount increased, the antimicrobial activities increased too. The usnic acid contents of *Rhizoplaca* species varied between 0.19–4.0% dry weight.

**Key words:** *Rhizoplaca*, Lichen, Antimicrobial Activity