

Pigments of Fly Agaric (*Amanita muscaria*)

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The complex pigment pattern of fly agaric (*Amanita muscaria*) cap skins has been studied by LC-DAD and mass spectrometry. Among the betaxanthins the corresponding derivatives of serine, threonine, ethanolamine, alanine, Dopa, phenylalanine and tryptophan are reported for the first time to contribute to the pigment pattern of fly agarics. Betalamic acid, the chromophoric precursor of betaxanthins and betacyanins, muscaflavin and *seco*-dopas were also detected. Furthermore, the red-purple muscapurpurin and the red muscarubrin were tentatively assigned while further six betacyanin-like components could not be structurally allocated. Stability studies indicated a high susceptibility of pigment extracts to degradation which led to rapid colour loss thus rendering a complete characterization of betacyanin-like compounds impossible at present. Taking into account these difficulties the presented results may be a starting point for a comprehensive characterization of the pigment composition of fly agarics.

Key words: *Amanita muscaria*, Fly Agaric, Betalains