

## Determination of monacolin K

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Red yeast rice is made by fermentation of rice with yeasts, mainly *Monascus purpureus*, resulting in the production of monacolins, the most abundant of which is monacolin K.<sup>1</sup>

Monacolin K is a molecule with a cholesterol-lowering effect. The chemical structure of monacolin K is basically identical to that of lovastatin, a statin used in the pharmaceutical industry to lower blood cholesterol levels (see Figure 1).

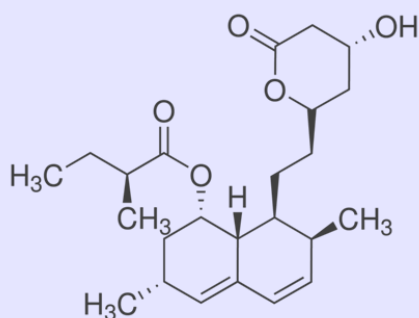


Figure 1: Monacolin K.<sup>2</sup>

Even with its low dosage in food supplements, the equivalence between monacolin K and lovastatin's structure has generated numerous comparisons and debates on its safety.

In the latest years, the European Commission asked EFSA to assess the safety of monacolin K and to advise on a daily intake that does not raise health concerns.<sup>2</sup>



Recently, the latest updates at European level suggest an imminent regulatory update.

**A draft Commission Regulation has been published** and the intention is to update Annex III to Regulation (EC) No 1925/2006 on substances subject to restrictions and substances under European Community surveillance.<sup>1</sup>

Specifically, **the daily intake level of monacolins from red yeast rice of 10 mg might be replaced by an intake level less than 3 mg** and it places under restrictions and under Community scrutiny of lower doses.

### Neutron analytical proposal

In view of the above Neutron aims to support clients with its expertise to put **safe products** in the market in order to guarantee **food safety** and **human health and well-being**.

Therefore, Neutron performs the analysis of **monacolin K** for **foods** and food **supplements** by HPLC-DAD technique.

### References

<sup>1</sup> Draft Commission Regulation amending Annex III to Regulation (EC) No 1925/2006 of the European Parliament and of the Council as regards monacolins from red yeast rice.

<sup>2</sup> Scientific opinion on the safety of monacolins in red yeast rice, EFSA Panel on Food Additives and Nutrient Sources added to Food (ANS), *EFSA Journal* 2018; 16(8):5368.