Contaminants - Raspberry leaf tea

In this guide

37. Few studies were found which had investigated potential contaminants in raspberry leaf.

38. As part of a screening study by Veatch-Blohm *et al*. (2021), Pb, Ni and Cu were not detected in a commercial raspberry leaf supplement sold in the USA. However, Cr (0.42 µg/g) and Zn (1.90 µg/g) were detected, each in one of the two samples tested. The authors noted that intakes of Zn would be within the tolerable upper intake level (TUL) established by the Institute of Medicine US Panel on Micronutrients in 2001 (40 mg/day). The metal levels in this study were compliant with the limits laid down for supplements within retained EU Commission Regulation (EC) No.1881/2006, as amended.

39. Several fungal species were detected in the raspberry leaf supplement, (*Aspergillus fumigatus*, *Microsporum* sp. and *Nocardia brasiliensis*), of which the authors suggested *Microsporum* sp. may be of concern in

immunocompromised individuals (Veatch-Blohm *et al*., 2021).

40. In one study of plant materials collected from farms located in eastern Poland between 2015 and 2018, the heavy metals Cd, Hg and Pb were detected in raspberry leaf at concentrations ranging from <0.005-0.613 mg/kg, while As was not detected (<0.1 mg/kg) (Kowalska, 2021). Levels of lead were well within the WHO-recommended limit of 10 mg/kg, whereas levels of Cd, at 0.211-0.613 mg/kg, in some samples slightly exceeded the WHO recommended limit of 0.3 mg/kg (Kowalska, 2021). Levels of Hg (0.005–0.010 mg/kg) were just above the LOQ. The levels of Cd, Pb and Hg were all within the legal limits for supplements established by retained EU Commission Regulation (EC) No. 1881/2006, as amended.

41. Sadło *et al.* (2015) reported on the results of field studies of pesticides applied at a commercial raspberry plantation. Various pesticides were applied in accordance with current pest control programmes and according to the instructions on their labels, and residues in both the fruit and leaves were reported. Residues of boscalid, cypermethrin, pyrimethanil, pyraclostrobin and chlorpyrifos were detected in the leaves at concentrations ranging from 0.15-30.6 mg/kg on the first day of harvesting, and these residues decreased each week during the harvesting period (Sadło *et al.*, 2015). Pesticide residues in the fruit were within their respective maximum residue levels (MRLs), while residues in the leaves exceeded their respective MRLs for herbal infusions (leaves and herbs) established by EU Regulation (EC) No. 396/2005. Dietary intakes were estimated based on an assumed daily consumption of dry leaves equivalent to a fresh weight of 7 g, and a body weight for an adult consumer of 76 kg. The highest estimated daily intake was for boscalid, which was up to 6.63% of its ADI established in the EU of 0.04 mg/kg bw, based on the analytical result for the first day of harvesting. Hence, at the levels found, pesticide residues in raspberry leaf do not pose a health concern to the consumer.