

Title Effects of processing methods and extraction solvents on concentration and antioxidant activity of peanut skin phenolics

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### **Abstract**

Peanut skin is a by-product of the peanut industry that has low economic value despite its high content of antioxidants such as phenolics. The effects of three skin removal methods (direct peeling, blanching, and roasting) and extraction solvents (water, ethanol, and methanol) on total phenolics and total antioxidant activities (TAA) of peanut skin extracts were studied, and the composition of extracts were determined by HPLC. Results show that both skin removal methods and extraction solvents had significant effects on total extractable phenolics and TAA, with the combination of roasting and ethanol extraction being the most efficient recovery method. One gram dry peanut skin contained 90–125 mg total phenolics. TAAs of water and ethanol extracts of peanut skin were 3.39 and 4.10 mM Trolox Equivalent/mM of total phenolics compared with 1.91 and 2.46, respectively, for green tea. Three classes of phenolics (phenolic acids, flavonoids, and stilbene) were found in peanut skin extracts.