

Letter to the Editor

Henna stone: a lesser-known solid material from which to obtain black henna paste

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As a contribution to the comprehensive review by de Groot (1), we would like to highlight a lesser-known commercially available solid material called 'henna stone' or 'German stone' in some countries. It is sold as 'natural stone' by local herbal sellers. In order to obtain a black henna paste for the purpose of temporary tattooing or hair dyeing, the stone is crushed into powder first and then mixed with natural henna, water, and hydrogen peroxide.

In our recent study (2), qualitative and quantitative chemical analyses using gas chromatography–mass spectrometry were performed on six samples of commercially available 'henna stones'. *p*-phenylenediamine (PPD) was found in all samples at concentrations ranging between 84.89% and 90.90%; these were significantly higher than previously reported PPD concentrations ranging between 2.35% and 64% in black henna samples (3–5).

Additionally, the colour of henna stones, which is whitish grey to brown and black (Fig. 1a), is reminiscent of the colour of PPD crystals/powder, which is yellowish white to light purple, and darkens on exposure to air via oxidation, turning first red, then brown, and finally black (3).

On the basis of our clinical observation of the physical appearance, the easy crushability of the stone into pieces, revealing yellowish white crystals (Fig. 1b), and the results of the chemical analyses, we propose that 'henna stones' contain high proportions of PPD.

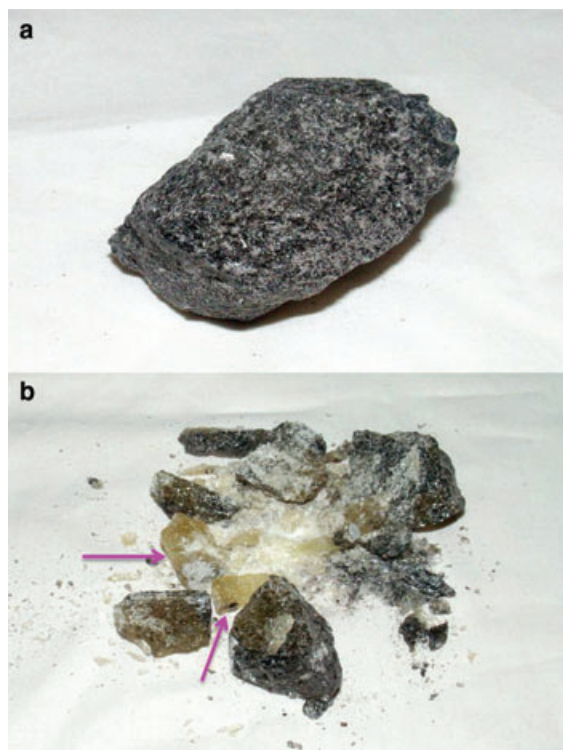


Fig. 1. A sample of whitish grey to brown and black 'henna stone' provided by one of the local herbal sellers in Turkey (a); the stone could be easily crushed into pieces, and whitish yellow crystals/powder (pink arrows) resembling *p*-phenylenediamine became visible (b).

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