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Data Article

Data on the inhibitory effect of traditional plants from Sri Lanka against tyrosinase and collagenase



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ABSTRACT

This article describes the inhibitory effects of extracts from 25 plants harvested in Sri Lanka against tyrosinase and collagenase. Inhibitors of these enzymes are common ingredients in cosmetics and medications, which help protect the skin against hyperpigmentation and premature aging. The article also discusses the polyphenol content of the extracts, which is well known to possess antioxidant properties. The extract data from the following plants, which have a long history in Sri Lankan traditional medicine, such as Ayurveda, have been provided: English name, “local name in Sri Lanka,” (scientific name). Indian copperleaf plant, “kuppameniya,” (*Acalypha indica*); red sandalwood, “madatiya,” (*Adenantha pavonina*); balipoovu plant, “polpala,” (*Aerva lanata*); snap ginger, “heen araththa,” (*Alpinia calcarata*); bael fruit, “beli,” (*Aegle marmelos*); coastal waterhyssop, “lunuwila,” (*Bacopa monnieri*); porcupine flower, “katu karandu,” (*Barleria prionitis*); balloon-vine plant, “wel penera,” (*Cardiospermum halicacabum*); water caltrop, “Katupila,” (*Flueggea leucopyrus*); Indian sarsaparilla, “iramusu,” (*Hemidesmus indicus*); malabar nut plant, “adhatoda,” (*Justicia adhatoda*); wood apple, “divul,” (*Limonia acidissima*); holy basil plant, “maduruthala,” (*Ocimum tenuiflorum*); emblic myrobalan plant, “nelli,” (*Phyllanthus emblica*); long pepper plant, “thippili,” (*Piper longum*); country borage plant, “kapparawalliya,” (*Plectranthus amboinicus*); common sesban, “wel

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murunga,” (*Sesbania sesban*); turkey berry, “gona batu,” (*Solanum rudepannum Dunal*); purple fruited pea eggplant, “welthibbatu,” (*Solanum trilobatum*); black plum, “madan,” (*Syzygium cumini*); crape jasmine, “wathusudda,” (*Tabernaemontana divaricate*); purple tephrosia, “pila,” (*Tephrosia purpurea*); Chinese chaste tree, “nika,” (*Vitex negundo*); and arctic snow, “suididda,” (*Wrightia antidysenterica*). The inhibitory effects of these plant extracts on tyrosinase and collagenase, as well as polyphenol contents in the extracts, are detailed in [Table 1](#).

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Specifications Table

Subject area	<i>Biology</i>
More specific subject area	<i>Food chemistry</i>
Type of data	<i>Table</i>
How data was acquired	<i>Total polyphenol content was determined by Folin-Ciocalteu method using gallic acid as a standard. Inhibitory effects of plant extracts on tyrosinase and collagenase activity were measured.</i>
Data format	<i>Analyzed</i>
Experimental factors	<i>Plant samples were harvested in the pilot farm in the Sri Lanka, and their contents were extracted with 70% ethanol.</i>
Experimental features	<i>Inhibitory effects of Sri Lankan traditional plants on tyrosinase and collagenase</i>
Data source location	<i>Negombo, Sri Lanka</i>
Data accessibility	<i>Data are available within this article</i>

Value of the data

- These data summarize the inhibitory effects of Sri Lankan plant extracts on tyrosinase and collagenase, which, because these effects are biologically important, will be valuable to a host disciplines, from the cosmetic industry, to nutrition and drug development.
- These data indicate that several plants exhibit significant inhibitory effects on tyrosinase and collagenase activities, which are important targets for future research as pharmacologic and cosmetic agents.
- These data provide a scientific assessment of plants that are widely used in Sri Lankan traditional medicine.

1. Data

The data, summarized in [Table 1](#), lists the percentages of *in vitro* tyrosinase and collagenase activity in the presence of sampled plant extracts normalized against the activity of these enzymes in the absence of the extracts. The table also includes the polyphenol content of sampled plant extracts.

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