Note: This is Online Appendix 1 of Singh, S., Bhandari, M.S. & Dwivedi, N., 2025, 'High-quality DNA extraction for *Desmodium gangeticum:* A medicinal shrub of Shivalik Himalayas*', Journal of Medicinal Plants for Economic Development* 9(1), a272. https://doi.org/10.4102/jomped.v9i1.272

ONLINE APPENDIX 1

Reagents and buffer solutions

Reagents:

- Tris base (Make: Qualigens).
- Ethylenediamine tetra-acetic acid (EDTA) (Make: Fisher Scientific).
- Sodium chloride (NaCl) (Make: Qualigens).
- Polyvinylpyrrolidone (PVP) (Make: Sigma-Aldrich).
- Cetyltrimethylammonium bromide (CTAB) (Make: Amresco).
- β-mercaptoethanol (Make: Sigma-Aldrich).
- Chloroform (Make: Qualigens).
- Isoamyl alcohol (Make: Merck).
- Absolute Ethanol (Make: Changshu Hongsheng Fine Chemical Co., Ltd).
- Isopropanol (Make: Emplura).
- RNase A (Make: EDNA).
- Liquid nitrogen.

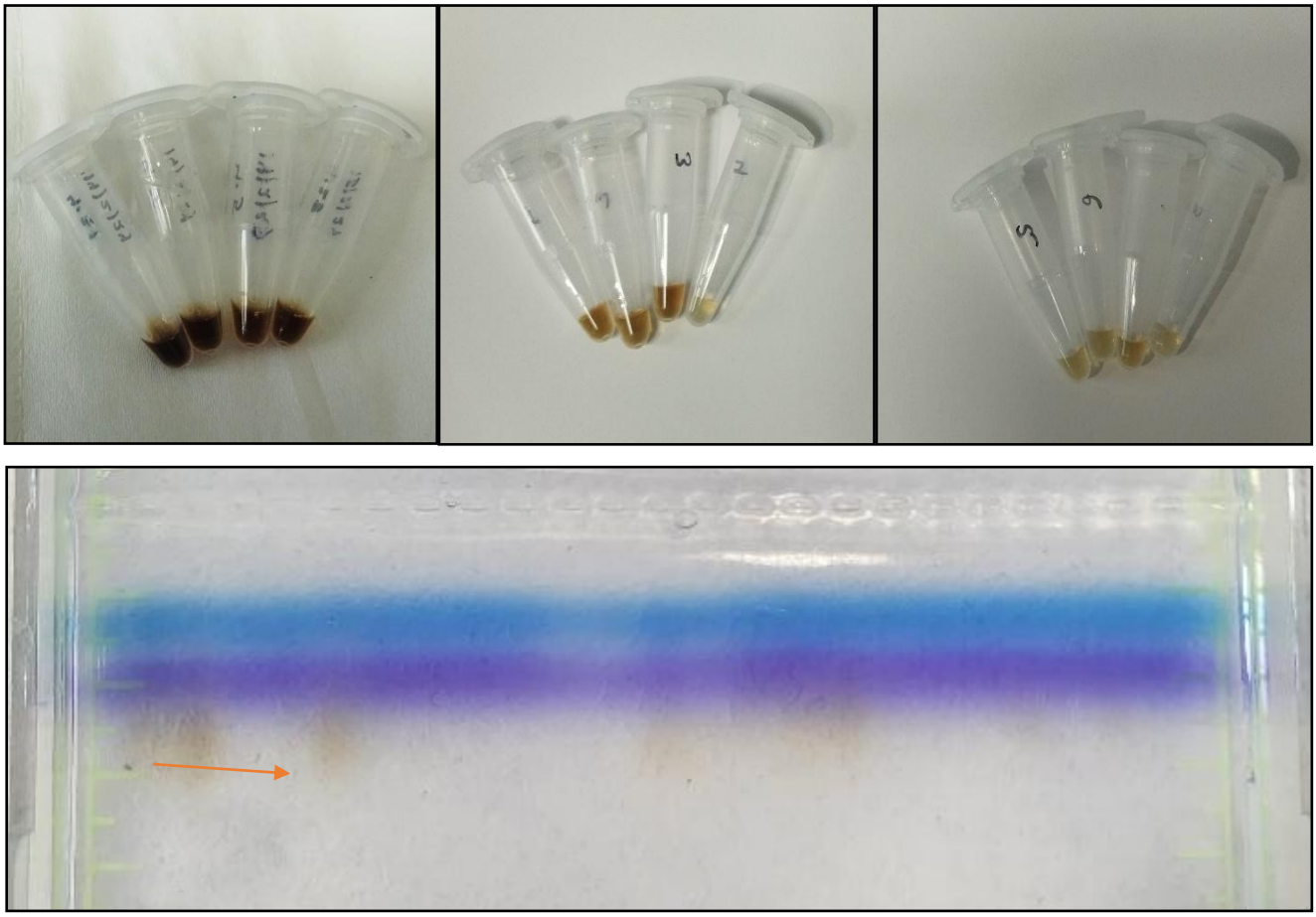
Buffer solutions:

- Chloroform: isoamyl alcohol (24:1, v/v).
- 5 M NaCl solution.
- Wash buffer: 70% Ethanol.
- TE buffer (consisting of 10 mM Tris–HCl, 1 mM EDTA; pH=8).
- 5× Gel loading dye: 0.25% Bromophenol blue, 150 mM EDTA, 70% Glycerol.
- 0.5× TBE buffer.

TABLE 1-OA1: Geolocations of the sampled individuals.

Samples	Latitude (°)	Longitude (°)	Altitude (m)	Plant height (m)	Location
TD 1.01	30°22'54.14"	78°00'43.49"	706	0.6	Harnaul
TD 1.02	30°22'51.76"	78°00'48.16"	705	0.4	Harnaul
TD 1.03	30°22'58.55"	78°00'46.68"	708	0.7	Harnaul
TD 1.04	30°22'47.48"	78°00'33.04"	718	0.6	Harnaul
TD 1.05	30°22'41.67"	78°00'37.69"	716	0.8	Harnaul
TD 1.06	30°20'28.53"	77°42'22.95"	640	0.8	Harnaul
TD 1.07	30°22'54.81"	78°01'09.37"	782	1.0	Dhaulas
TD 1.08	30°22'56.54"	78°00'42.78"	780	1.2	Dhaulas
TD 1.09	30°22'44.46"	78°00'43.26"	786	0.9	Dhaulas
TD 1.10	30°22'54.45"	78°00'46.66"	788	1.1	Dhaulas
TD 1.11	30°22'57.13"	78°00'33.75"	783	1.0	Dhaulas
TD 1.12	30°22'50.01"	78°00'30.15"	778	1.2	Dhaulas

(a) (b) (c)



(d)

FIGURE 1-OA1: DNA observed after extraction through distinct buffers in *D. gangeticum*: (a) brownish hue in the DNA extracted using Original Base buffer, (b) Light brown extracted DNA using Buffer A with 2% PVP, (c) Slightly pigmented DNA isolated using optimized Buffer A with 4% PVP, and (d) Image of Agarose gel showing the brown pigments when loaded with DNA extracted with Buffer A.