

ConPhyMP checklist of items for conducting and reporting analytical methods^{1,2} relevant for extract type B (for species or botanical drugs widely used or traded without a monograph in a national or international pharmacopoeia)

| SECTION/TOPIC | ITEM NO. | CHECKLIST ITEM | YES | NO | NOT APPLICABLE | PAGE NO., IF ANY |
|---|----------|---|-----|----|----------------|------------------|
| Type of extract | 1 | B – Confirm that the species or botanical drug under investigation is a widely used or traded one without a monograph in a national or international pharmacopoeia. | | | | |
| Preferred/ main methods for extract characterisation/ chemical analysis | 2 | (a) Triple chemical fingerprinting methods, each with one or more detection parameters. (b) Quantification of at least two marker compounds (unless this is not feasible, evidence needs to be provided), and justification of the choice of markers (if applicable). | | | | |
| Alternative methods for extract characterisation/chemical analysis | 3 | (a) Single chemical fingerprinting method, three different detection parameters should be provided (i.e., altered detection parameters, like TLC/HPTLC with different staining reagents and/or UV excitation wavelengths, HPLC-DAD/LC-DAD with different wavelengths). The same applies to coupling MS or NMR to chromatographic techniques. (b) Quantification of at least two marker compounds (unless this is not feasible, evidence needs to be provided), and justification of the choice of markers (if applicable). | | | | |
| Use of reference standards | 4 | (a) Direct overlay of the chromatogram of the sample with that of an officially specified reference standard (if applicable) (b) Chromatographic fingerprinting: Direct overlay of the chromatogram of the sample with that of official reference standards of the powdered plant material or the dry extract from the plant material. | | | | |
| Comparison of different extracts/ samples of the same plants | 5 | (a) Direct comparison of the chromatographic/spectroscopic system and/or scoring system for “similarity” to be followed. | | | | |

Note: Please also include here the following information about your submitted manuscript:

Name of the journal:

Date of the enquiry:

Title of the manuscript:

List of the authors:

¹ Please acknowledge/cite this as follows: Heinrich M, Jalil B, Abdel-Tawab M, Echeverria J, Kulic Ž, McGaw LJ, et al. Best Practice in the chemical characterisation of extracts used in pharmacological and toxicological research—The ConPhyMP—Guidelines. *Frontiers in Pharmacology*. 2022;13:953205. <https://doi.org/10.3389/fphar.2022.953205>

² We strongly recommend reading this checklist in conjunction with ConPhyMP 2022 explanation and elaboration for important clarifications on all items. If relevant, we also recommend after reading Heinrich et al. (2020) Best practice in research—Overcoming common challenges in phytopharmacological research. *Journal of Ethnopharmacology*. 2020;246:112230. <https://doi.org/10.1016/j.jep.2019.112230>