



Government Laboratory of Hong Kong  
Proficiency Testing Programme (GLHK PT 21-03)  
Assay of Chinese Materia Medica

# **ASSAY OF CHINESE MATERIA MEDICA**

## **PROFICIENCY TESTING PROGRAMME**

### **GLHK PT 21-03**

### **FINAL REPORT**

**31 Dec 2021**



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## Summary of Results

1. The proficiency testing programme (GLHK PT 21-03) was organised by the Government Laboratory of Hong Kong (GLHK) with the support from the Hong Kong Council for Testing and Certification (HKCTC). The main objectives of the proficiency testing programme are (i) to assist participating laboratories in demonstrating competence on the analysis of two selected CMMs, namely Bran-fried *Atractylodis Rhizoma* (麩炒蒼朮) and *Codonopsis Radix* as decoction pieces (黨參飲片) according to the corresponding monographs of the 2020 edition of *Chinese Pharmacopoeia (CP 2020)*; and (ii) to identify problems and opportunities for improvement.
2. A total of 11 local laboratories registered for the programme. Participants were requested to determine the mass fractions (%) of chemical marker(s), extractives and water content in the two CMMs. The number of results returned for each CMM are summarised in Table 1.

Table 1: Number of results returned for each CMM

CMM	Sample type	Water content	Chemical marker(s)	Extractives
<i>Atractylodis Rhizoma</i> (蒼朮)	Bran-fried (麩炒)	10	9	N/A
<i>Codonopsis Radix</i> (黨參)	Decoction Pieces (飲片)	10	N/A	9

N/A Not applicable

3. The assigned values and standard deviation for proficiency assessment ( $\sigma_{pt}$ ) for the chemical marker(s), extractives and water content were derived as the robust average and robust standard deviation of the participants' results using robust statistics according to the procedures outlined in Annex C of ISO 13528:2015.
4. The z-scores of the participants for the water content are summarised as follows:

Water content	Number of participants (Percentage)		
	$ z  \leq 2.0$	$2.0 <  z  < 3.0$	$ z  \geq 3.0$
<i>Atractylodis Rhizoma</i> (蒼朮)	9 (90 %)	1 (10 %)	0 (0 %)
<i>Codonopsis Radix</i> (黨參)	9 (90 %)	0 (0 %)	1 (10%)



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5. The z-scores of the participants for the mass fraction of each measurand (as-received basis) are summarised as follows:

Measurand (as-received basis)	Number of participants (Percentage)		
	$ z  \leq 2.0$	$2.0 <  z  < 3.0$	$ z  \geq 3.0$
Atractylodin	8 (89 %)	0 (0 %)	1 (11 %)
Extractives	8 (89 %)	0 (0 %)	1 (11 %)

6. The z-scores of the participants for the mass fraction of each measurand (dry-mass basis) are summarised as follows:

Measurand (dry-mass basis)	Number of participants (Percentage)		
	$ z  \leq 2.0$	$2.0 <  z  < 3.0$	$ z  \geq 3.0$
Atractylodin	7 (78 %)	1 (11 %)	1 (11 %)
Extractives	9 (100 %)	0 (0 %)	0 (0 %)

~End~