

Fact sheet of reference DNA sequences of *Panax quinquefolium* (西洋参)

Summary	Information
Scientific name	<i>Panax quinquefolium</i> L.
Type of reference material used for data generation	● Radix Panacis Quinquefolii (西洋参) ● Plant voucher specimen
Radix Panacis Quinquefolii (西洋参) (number of specimens / locality)	● 4 / Huadian, Jilin Province, China ● 8 / Laiyang, Shangdong Province, China ● 4 / Huairou, Beijing, China ● 3 / Ontario, Canada ● 4 / Wisconsin, America ● 4 / British Columbia, Canada
Plant voucher specimen (number of specimens / locality)	● 2 / Huadian, Jilin Province, China ● 3 / Laiyang, Shangdong Province, China ● 2 / Huairou, Beijing, China
Total number of specimen	● 34
Specimen source	● GCMTI collection ● Hong Kong Chinese Materia Medica Standards (HKCMMS) Project
Method for data generation	● GCMTI RD-5:2020
Length of DNA barcode	● Nuclear internal transcribed spacer 2 (ITS2) is 230 bp ● Chloroplast <i>psbA-trnH</i> intergenic

	spacer (<i>psbA-trnH</i>) is from 487 to 495 bp ● Chloroplast ribulose biphosphate carboxylase large chain (<i>rbcL</i>) is 553 bp
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Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918

>RD94-A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGCTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918

>RD94-A *psbA-trnH*

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI180918

>RD94-A *rbcL*

AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTCT
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD94
Sample mark	RD94-A
Locality	Huadian, Jilin Province, China
Corresponding CMM	RD250
Authenticated	Yes

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918

>RD95-A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918

>RD95-A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTC
GTTTTATTTTATCGGTGGCTCATGAGTGAGTATCATGCT
TTCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTC
TTCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGA
AAAGATAAAAATGTTGGACTTTTTACTTAGTTAACTCTTA
ATATTTTATCTCGAAAATAAGAAAGATAAGAAAGAAAT
AATGATGAATGGTAAAAATTAATCTTTGAAACGTAAG
AAAAAGAAAAAAGAATAGTAGGGGGCGGATGTAGCCA
AGTGGATCAAGGCAGT

Remarks : observations at nucleotide positions 190 and 442-448

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI180918

>RD95-A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAAA
GCCCTGCGTGCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD95
Sample mark	RD95-A
Locality	Laiyang, Shangdong Province, China
Corresponding CMM	RD251
Authenticated	Yes
Remarks	<i>psbA-trnH</i> : indel 190 and 442-448

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918

>RD96-A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCC

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918

>RD96-A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGCGGTATTGCTCCTTTTTTATTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTC
GTTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCT
TTCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTC
TTCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGA
AAAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTA
ATATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAAT
AATGATGAATGGTAAAAATTAATCTTTGAAACGTAAG
AAAAAGAAAAAAGAATAGTAGGGGGCGGATGTAGCCA
AGTGATCAAGGCAGT

Remarks : observations at nucleotide positions 190 and 442-448

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI180918

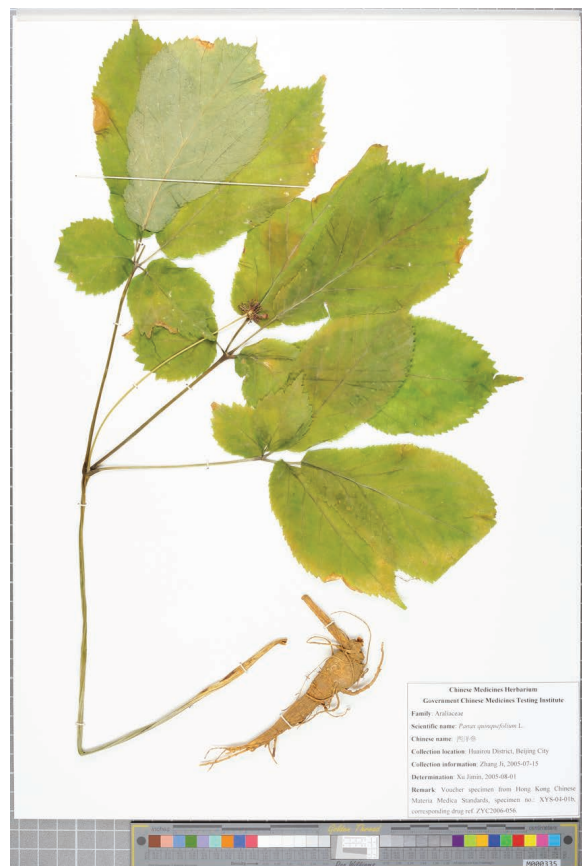
>RD96-A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD96
Sample mark	RD96-A
Locality	Huairou, Beijing, China
Corresponding CMM	RD252
Authenticated	Yes
Remarks	<i>psbA-trnH</i> : indel 190 and 442-448

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918

>RD97-A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGCTCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918

>RD97-A *psbA-trnH*

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI180918

>RD97-A *rbcL*

AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD97
Sample mark	RD97-A
Locality	Laiyang, Shangdong Province, China
Corresponding CMM	RD253
Authenticated	Yes

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918-2

>RD104-A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918-2

>RD104-A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTTATTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI180918-2

>RD104-A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD104
Sample mark	RD104-A
Locality	Huadian, Jilin Province, China
Corresponding CMM	RD250
Authenticated	Yes

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918-2

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>RD105-A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCC
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Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918-2

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>RD105-A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTAGTAGTATTT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTCT
TCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
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Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

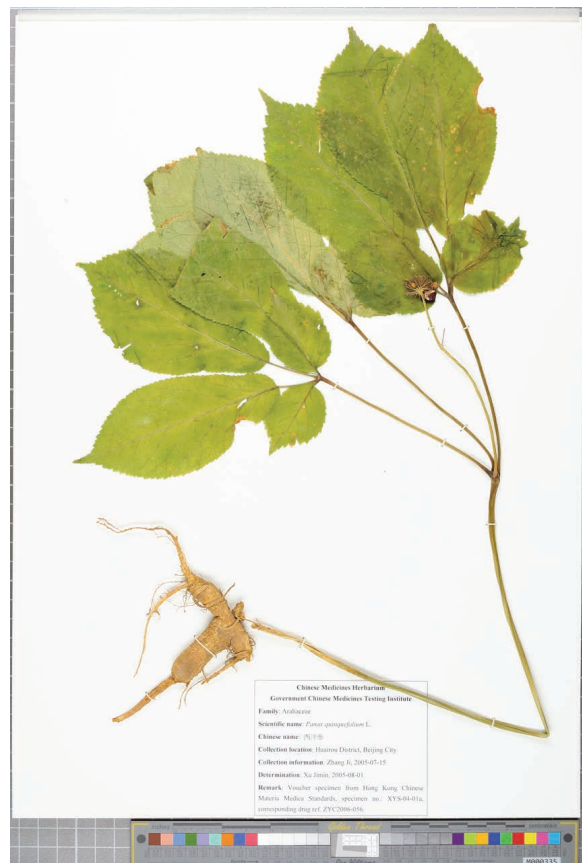
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TCTTGGCAGCATTCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACGTGTGGACCGATGAAATGACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC
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Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD105
Sample mark	RD105-A
Locality	Huairou, Beijing, China
Corresponding CMM	RD252
Authenticated	Yes

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI180918-2

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>RD106-A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCC
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Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI180918-2

```
>RD106-A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATAATCTAGAATTTAGCTACTTCT
TCCCAATCTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
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Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

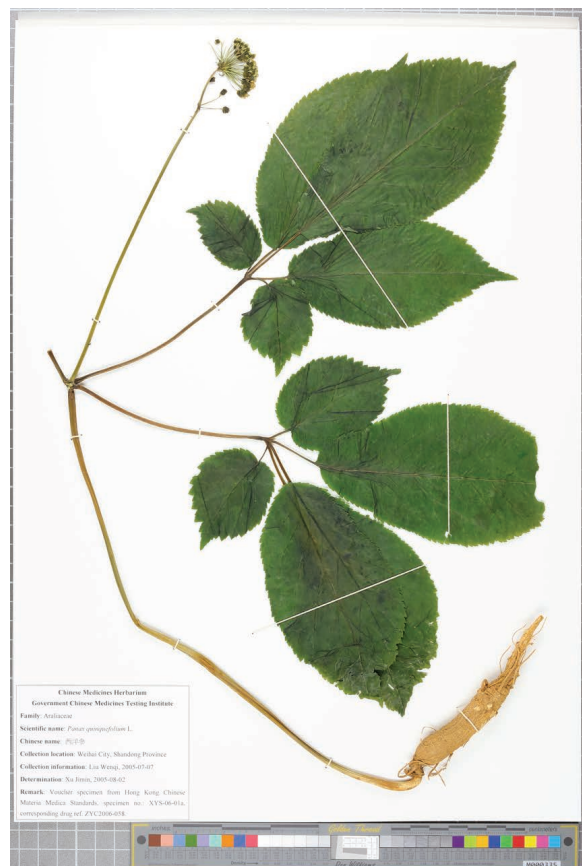
Batch ID. BI180918-2

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AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC
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Reference Detail

Description of reference material	Plant specimen
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD106
Sample mark	RD106-A
Locality	Laiyang, Shangdong Province, China
Corresponding CMM	RD253
Authenticated	Yes

Image



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190620

>RD250-1A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190620

>RD250-1A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190620

>RD250-1A_rbcL

AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
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Reference Detail

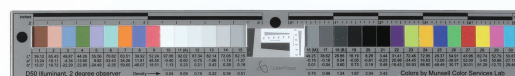
Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD250
Sample mark	RD250-1A
Locality	Huadian, Jilin Province, China
Corresponding plant voucher specimen	RD94 and RD104
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190620

```
>RD250-2A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
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Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190620

```
>RD250-2A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTGCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190620

```
>RD250-2A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD250
Sample mark	RD250-2A
Locality	Huadian, Jilin Province, China
Corresponding plant voucher specimen	RD94 and RD104
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190620

```
>RD250-3A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTCGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGCTCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190620

```
>RD250-3A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTGCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190620

```
>RD250-3A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD250
Sample mark	RD250-3A
Locality	Huadian, Jilin Province, China
Corresponding plant voucher specimen	RD94 and RD104
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190620

```
>RD250-4A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190620

```
>RD250-4A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAGGAGCAATAACCTCTTCTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190620

```
>RD250-4A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD250
Sample mark	RD250-4A
Locality	Huadian, Jilin Province, China
Corresponding plant voucher specimen	RD94 and RD104
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

>RD251-1A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

>RD251-1A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

>RD251-1A_rbcL

AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD251
Sample mark	RD251-1A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD95
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

```
>RD251-2A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCC
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

```
>RD251-2A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

```
>RD251-2A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD251
Sample mark	RD251-2A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD95
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190816

```
>RD251-3C ITS2
CGCATCGCGTCGCCCCMCAACCCATCACTCCTTTGCGGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Remarks: observation at nucleotide position 17

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190816

```
>RD251-3C_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190816

```
>RD251-3C_rbcL
AAGTGTTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAAACTTTCCAAGGCCCGCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD251
Sample mark	RD251-3C
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD95
Authenticated	Yes
Remarks	ITS2: 17M

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

```
>RD251-4A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

```
>RD251-4A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

```
>RD251-4A_rbcL
AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD251
Sample mark	RD251-4A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD95
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

>RD252-1A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGCTCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

>RD252-1A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTGCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTGTCTTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

>RD252-1A_rbcL

AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD252
Sample mark	RD252-1A
Locality	Huairou, Beijing, China
Corresponding plant voucher specimen	RD96 and RD105
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

>RD252-2A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

>RD252-2A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

>RD252-2A_rbcL

AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD252
Sample mark	RD252-2A
Locality	Huairou, Beijing, China
Corresponding plant voucher specimen	RD96 and RD105
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

>RD252-3A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

>RD252-3A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTGCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

>RD252-3A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD252
Sample mark	RD252-3A
Locality	Huairou, Beijing, China
Corresponding plant voucher specimen	RD96 and RD105
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625

>RD252-4A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625

>RD252-4A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625

>RD252-4A_rbcL

AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD252
Sample mark	RD252-4A
Locality	Huairou, Beijing, China
Corresponding plant voucher specimen	RD96 and RD105
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-2

>RD253-1A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-2

>RD253-1A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-2

>RD253-1A_rbcL

AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD253
Sample mark	RD253-1A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD97 and RD106
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-2

```
>RD253-2A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-2

```
>RD253-2A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-2

```
>RD253-2A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD253
Sample mark	RD253-2A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD97 and RD106
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-2

```
>RD253-3A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-2

```
>RD253-3A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-2

```
>RD253-3A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD253
Sample mark	RD253-3A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD97 and RD106
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-2

```
>RD253-4A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-2

```
>RD253-4A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-2

```
>RD253-4A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD253
Sample mark	RD253-4A
Locality	Laiyang, Shangdong Province, China
Corresponding plant voucher specimen	RD97 and RD106
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD254-1A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD254-1A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

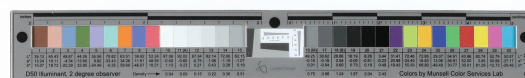
```
>RD254-1A_rbcL
AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD254
Sample mark	RD254-1A
Locality	Ontario, Canada
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD254-2A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD254-2A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

```
>RD254-2A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD254
Sample mark	RD254-2A
Locality	Ontario, Canada
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD254-3A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD254-3A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTGTCTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

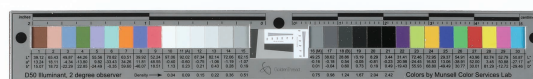
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>RD254-3A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD254
Sample mark	RD254-3A
Locality	Ontario, Canada
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD257-2A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD257-2A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

```
>RD257-2A_rbcL
AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD257
Sample mark	RD257-2A
Locality	Wisconsin, America
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD257-3A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD257-3A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

```
>RD257-3A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD257
Sample mark	RD257-3A
Locality	Wisconsin, America
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190816

>RD257-4A ITS2

CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGCTCTCGACGTGCGCTCCGACCG

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190816

>RD257-4A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190816

>RD257-4A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD257
Sample mark	RD257-4A
Locality	Wisconsin, America
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190816

```
>RD257-5A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190816

```
>RD257-5A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTCTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190816

```
>RD257-5A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD257
Sample mark	RD257-5A
Locality	Wisconsin, America
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD260-1A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD260-1A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

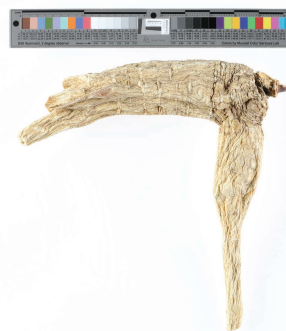
```
>RD260-1A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD260
Sample mark	RD260-1A
Locality	British Columbia, Canada
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190625-3

```
>RD260-3A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTGCGCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190625-3

```
>RD260-3A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAATCTAGAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190625-3

```
>RD260-3A_rbcL
AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGGCCGCGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD260
Sample mark	RD260-3A
Locality	British Columbia, Canada
Authenticated	Yes

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190816

```
>RD260-4A ITS2
CGCATCGCGTCGCCCCMCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Remarks: observation at nucleotide position 17

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190816

```
>RD260-4A_psbA-trnH
ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGTATACGAGTTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTTATCTCGAAAATAAGAAAAGATAAGAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAAACGTAAGG
AAAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190816

```
>RD260-4A_rbcL
AAGTGTGGATTCAAAGCTGGTGTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAAACTTTCCAAGGCCCGCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD260
Sample mark	RD260-4A
Locality	British Columbia, Canada
Authenticated	Yes
Remarks	ITS2: 17M

Image

Front view



Back view



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI190816

```
>RD260-5A ITS2
CGCATCGCGTCGCCCCCAACCCATCACTCCTTTGCGGGA
GTCGAGGCGGAGGGGCGGATAATGGCCTCCCGTGTCTCA
CCGCGCGGTTGGCCCAAATGCGAGTCTTGGCGATGGAC
GTCACGACAAGTGGTGGTTGTAAAAAGCCCTCTTCTCATG
TCGTGCGGTGACCCGTCGCCAGCAAAAGCTCTCATGACCC
TGTTGCGCCGTCCTCGACGTGCGCTCCGACCG
```

Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*)

Batch ID. BI190816

```
>RD260-5A_psbA-trnH
ATAAATTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATC
TACAAATGGATAAGACCCGGTCTTAGTGATACGAGTTT
TTTGAAATAAAAAAGGAGCAATAACCTCTTCTTGTTCTAT
CAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATT
GACTTACCTAGTTTCTTTAAATAAATTTAAAAAACGTCG
TTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTT
TCGTTCTGTATTAATCATTAACTAGAAATTTAGCTACTTCT
TCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAA
AAGATAAAAAATGTTGGACTTTTTACTTAGTTAATACTTAA
TATTTTATCTCGAAAATAAGAAAAGATAAGAAAAGAAATA
ATGATGAATGGTAAAAATTTAATCTTTTGAACGTAAGG
AAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCA
AGGCAGT
```

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI190816

```
>RD260-5A_rbcL
AAGTGTTGGATTCAAAGCTGGTGTTAAAGATTACAAATTG
ACTTATTATACTCCTGACTATGACCCCAAAGATACTGATA
TCTTGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCC
AGCTGAAGAAGCAGGGGCGCGGTAGCTGCCGAATCTTC
TACTGGTACATGGACAACCTGTGTGGACCGATGGACTTACT
AGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAG
CCCGTTGCTGGAGAAGAACTCAATTTATTGCTTATGTAG
CTTACCCATTAGACCTTTTGAAGAAGGTTCTGTACTAA
CATGTTTACTTCCATTGTAGGTAATGTATTTGGGTTCAA
GCCCTGCGTGCTCTACGTCTGGAAGATCTGCGAATCCCTG
TTGCTTATGTTAAAACTTTCCAAGGCCCGCCTCATGGCAT
CCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCC
CCTGTTGGGATGTACTATTAAACCTAAATTGGGGTTATCT
GCTAAAAACTACGGTAGAGCGGTTTATGAATGTCTC
```

Reference Detail

Description of reference material	Radix Panacis Quinquefolii
Scientific name	<i>Panax quinquefolium</i> L.
Laboratory number	RD260
Sample mark	RD260-5A
Locality	British Columbia, Canada
Authenticated	Yes

Image

Front view



Back view



[illegible]

[illegible]

>RD260-3A psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATCTACAAATGGATAAGACCCGGTCTTAGTGTATACGAGTTTTTTT
 GAAATAAAAAGGAGCAATAACCTCTTTCTTGTTCTATCAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATTTGACTTA
 CCTAGTTTCTTTAAATAAAATTTAAAAAACGTCGTTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTTTCGTTCTGT
 ATTAATCATTAATCTAGAATTTAGCTACTTCTTCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAAAAGATAAAAAAT
 GTTGGACTTTTTACTTAGTTAATACTTAATATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAAATAATGATGAATGGTAA
 AAATTTAATCTTTTGAAACGTAAGGAAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCAAGGCAGT

>RD260-4A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATCTACAAATGGATAAGACCCGGTCTTAGTGTATACGAGTTTTTTT
 GAAATAAAAAGGAGCAATAACCTCTTTCTTGTTCTATCAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATTTGACTTA
 CCTAGTTTCTTTAAATAAAATTTAAAAAACGTCGTTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTTTCGTTCTGT
 ATTAATCATTAATCTAGAATTTAGCTACTTCTTCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAAAAGATAAAAAAT
 GTTGGACTTTTTACTTAGTTAATACTTAATATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAAATAATGATGAATGGTAA
 AAATTTAATCTTTTGAAACGTAAGGAAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCAAGGCAGT

>RD260-5A_psbA-trnH

ATAACTTCCCTCTAGACCTAGCTGCTGTCGAAGCTCCATCTACAAATGGATAAGACCCGGTCTTAGTGTATACGAGTTTTTTT
 GAAATAAAAAGGAGCAATAACCTCTTTCTTGTTCTATCAAGAGGGCGGTATTGCTCCTTTTTTTATTTAGTAGTATTTGACTTA
 CCTAGTTTCTTTAAATAAAATTTAAAAAACGTCGTTTTATTTTATCGGTTGGCTCATGAGTGAGTATCATGCTTTCGTTCTGT
 ATTAATCATTAATCTAGAATTTAGCTACTTCTTCCCAATCTTTATCTTTTGGGAAGTGTTTTTAAAAAGAAAAGATAAAAAAT
 GTTGGACTTTTTACTTAGTTAATACTTAATATTTTTATCTCGAAAATAAGAAAGATAAGAAAGAAAATAATGATGAATGGTAA
 AAATTTAATCTTTTGAAACGTAAGGAAAAGAATAGTAGGGGGGCGGATGTAGCCAAGTGGATCAAGGCAGT

Partial chloroplast ribulose biphosphate carboxylase large chain (*rbcL*) sequence of plant voucher specimen of *Panax quinquefolium* L. and Chinese Materia Medica (CMM) *Panacis Quinquefolii Radix*

>RD94-A_rbcL

AAGTGTGGATTCAAAGCTGGTGTTAAAGATTACAAATTGACTTATTATACTCCTGACTATGACCCCAAAGATACTGATATCT
TGGCAGCATTCCGAGTAACTCCTCAACCTGGAGTTCAGCTGAAGAAGCAGGGGCCGCGGTAGCTGCCGAATCTTCTACTGG
TACATGGACAACCTGTGTGGACCGATGGACTTACTAGCCTTGATCGTTACAAAGGGCGATGCTACAAAATAGAGCCCGTTGCT
GGAGAAGAACTCAATTTATTGCTTATGTAGCTTACCCATTAGACCTTTTTGAAGAAGGTTCTGTTACTAACATGTTTACTTCC
ATTGTAGGTAATGTATTGGGTTCAAAGCCCTGCGTGTCTACGTCTGGAAGATCTGCGAATCCCTGTTGCTTATGTTAAAC
TTTCCAAGGCCCGCCTCATGGCATCCAAGTTGAGAGAGATAAATTGAACAAGTATGGTCGTCCTCCCTGTTGGGATGTACTATTA
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