

Fact sheet of reference DNA sequences of *Ephedra sinica* (草麻黃)

Summary	Information
Scientific name	<i>Ephedra sinica</i> Stapf
Type of reference material used for data generation	● Plant voucher specimen ● Herba Ephedrae (麻黃)
Plant voucher specimen (number / locality)	● 4 / Wenquan County, Xinjiang Uygur Autonomous Region, China
Chinese Materia Medica (number / locality)	● 16 / Wenquan County, Xinjiang Uygur Autonomous Region, China
Total number of specimen	● 20
Specimen source	● GCMTI collection ● Hong Kong Chinese Materia Medica Standards (HKCMMS) Project
Method for data generation	● GCMTI RD-5:2020 (modified polymerase chain reaction conditions, see Appendix 1)
Length of DNA barcode	● Nuclear internal transcribed spacer 2 (ITS2) is 251 bp ● Chloroplast <i>psbA-trnH</i> intergenic spacer (<i>psbA-trnH</i>) is 546 bp

Summary	Information
	● Chloroplast ribulose biphosphate carboxylase large chain (<i>rbcL</i>) is 553 bp

Appendix 1**Modified polymerase chain reaction (PCR) conditions for *rbcL*****I) PCR cycling condition**

Temperature	Time	No. of cycles
94 °C	4 min	1
94 °C	30 s	45
55 °C	30 s	
72 °C	1 min	
72 °C	10 min	1
4 °C	∞	-

Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI221230

>22RD102-1A ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGAGGGGTGCGCATCCGGCACCGACCGTGC GGAGAG
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221230

>22RD102-1A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTGATAATATGAGTGAGTATCGACTTA
GGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230

>22RD102-1A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTGGACCTTT
TTGAAGAAGGTTCTGTTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAATTAACAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Plant voucher specimen
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD102
Sample mark	22RD102-1A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding CMM specimen	22RD107, 22RD108, 22RD109
Authenticated	Yes
Remarks	-

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI221230

>22RD103-1A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAG
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221230

>22RD103-1A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTATCTGTCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCTGAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230

>22RD103-1A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGCAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAATTAACAAAATACGGACGTCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Plant voucher specimen
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD103
Sample mark	22RD103-1A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding CMM specimen	22RD107, 22RD108, 22RD109
Authenticated	Yes
Remarks	-

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI221230

>22RD104-1A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGCGGGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221230

>22RD104-1A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230

>22RD104-1A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTTT
TTGAAGAAGGTTCTGTTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Plant voucher specimen
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD104
Sample mark	22RD104-1A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding CMM specimen	22RD107, 22RD108, 22RD109
Authenticated	Yes
Remarks	-

Image



Reference DNA Sequence

Plant Specimen

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI221230

>22RD105-1A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTGCGATCCGGCACCGACCGTGCGGGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221230

>22RD105-1A_psbA-trnH

ACAATTTTCCTTGTGATTGGCATCAATGGAATTC AAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTATCTGCTTTGTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGAACACTTTGGATTTCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230

>22RD105-1A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATATCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTTATTGCTTATGTAGCATATCCTTTGGACCTTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Plant voucher specimen
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD105
Sample mark	22RD105-1A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding CMM specimen	22RD107, 22RD108, 22RD109
Authenticated	Yes
Remarks	-

Image



Reference DNA Sequence

Chinese Materia Medica (CMM)

DNA Information

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2)

Batch ID. BI221107

>22RD107-1A ITS2

CAAACCAACAATTCGCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221107

>22RD107-1A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAGAACTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAACAACCTTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221107

>22RD107-1A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-1A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BI221107

>22RD107-2A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221107

>22RD107-2A_psbA-trnH

ACAATTTTCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGTCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAACAACCTTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221107

>22RD107-2A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-2A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BI221230-2

>22RD107-5A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GG GAGA
TGCTGCGCGAGGTTTCCGATCGRAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

Remarks: observation at nucleotide position 208

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

Batch ID. BI221230-2

>22RD107-5A *psbA-trnH*

ACAATTTTCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGTCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAATGCAACGGAAAAAAGTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAACAACTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230-2

>22RD107-5A *rbcL*

AAGCGTAGGATTTAAAGCTGGTGTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTTT
TTGAAGAAGGTTCTGTTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

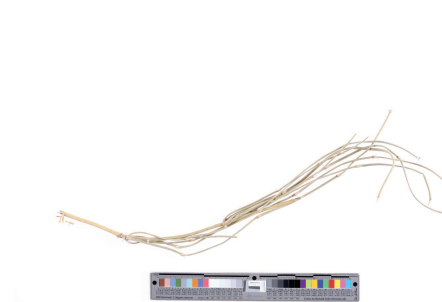
Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-5A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	ITS2: 208R

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. BIC250520

>22RD107-6B ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTGCGATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD107-6B_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGTCTTTGTTCAATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCCTGGAATAAGTCG
CCCACATTCGGTAGGATGAACAGAAAAACAACCTCTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD107-6B_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-6B
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD107-7A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD107-7A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGTCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCCTGGAATAAGTCG
CCCACATTCCTGAGGATGAACAGAAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD107-7A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-7A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD107-11A ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD107-11A_psbA-trnH

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TCTATAGATGGTAAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD107-11A_rbcL

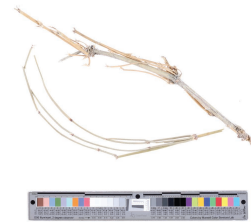
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CTGATATCTTGGCAGCATTCCGAGTAACTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-11A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD107-12A ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD107-12A_psbA-trnH

ACAATTTTCCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTAAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD107-12A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD107
Sample mark	22RD107-12A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BI221107

>22RD108-1B ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221107

>22RD108-1B_psbA-trnH

ACAATTTTCTCTTGATTGGCATCAATGGAATTCAAT
TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
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GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GGAGTTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221107

>22RD108-1B_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
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CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-1B
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BI221230-2

>22RD108-3A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BI221230-2

>22RD108-3A_psbA-trnH

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TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230-2

>22RD108-3A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
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AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-3A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD108-5A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD108-5A_psbA-trnH

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TCTATAGATGGTTAATTAGATAGAATTCTAGGTATTC
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CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAGAACTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAACAACCTCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD108-5A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
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ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-5A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD108-6B ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD108-6B_psbA-trnH

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GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
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CCGATCTTGCAACACTTGGATTTCCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAAACAACCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD108-6B_rbcL

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TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-6B
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520

>22RD108-8A ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520

>22RD108-8A_psbA-trnH

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GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAAAAAGTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAAACAACCTCTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520

>22RD108-8A_rbcL

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TTAACTTATTATACTCCAGAGTATCAGACTAAGAACA
CTGATATCTTGGCAGCATTCCGAGTAACCTCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-8A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520-2

>22RD108-11A ITS2

CAAACCAACAATTCGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGAGGGGTGCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520-2

>22RD108-11A_psbA-trnH

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TCTATAGATGGTAAATTAGATAGAATTCTAGGTATTC
CTTTCATCGTACCAAACCTCTAAAGGAGGTTTGGTAC
CTTATCTGCTTTGTTTCATATCCACATTATAAGATATC
GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
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GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
TAGAAAAATGCAACGGAAGAACTTGTGGGAGTGAGTA
CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAACAACCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520-2

>22RD108-11A_rbcL

AAGCGTAGGATTTAAAGCTGGTGTTAAAGATTATAGA
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CTGATATCTTGGCAGCATTCCGAGTAACTCCTCAACC
CGGAGTACCGGCCGAGGAAGCAGGCGCAGCGGTAGC
TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
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GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-11A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520-2

>22RD108-12A ITS2

CAAACCAACAATTGCCCCCGGCTCATGTCGTCGGGG
GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520-2

>22RD108-12A_psbA-trnH

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GAGTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
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GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCAAGTACTCATATCCCAATCATGCCAAACA
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CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCACATTCCGTAGGATGAACAGAAAAACAACCTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520-2

>22RD108-12A_rbcL

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GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
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TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
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GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-12A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BIC250520-2

>22RD108-13A ITS2

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GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGAGGGGTGCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCGATCGGAAAAGGACTTCAT
CGAAGGCGGGAGTTATCCCGTCACAGACG

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

Batch ID. BIC250520-2

>22RD108-13A_psbA-trnH

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CCCACATTCCGTAGGATGAACAGAAAACAACCTTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BIC250520-2

>22RD108-13A_rbcL

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TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
ACTGATGGTCTTACTAGTCTTGATCGTTACAAAGGAC
GATGCTATGATATCGAACCTGTTCCGGGAGAAGACAA
TCAATTTATTGCTTATGTAGCATATCCTTTGGACCTT
TTGAAGAAGGTTCTGTACTAACATGTTTACTTCTATT
GTGGGGAATGTTTTTGGTTTTAAAGCTCTACGAGCTCT
ACGCCTAGAAGATTGCGAATTCCTACTGCTTATATC
AAAACATTTCAAGGTCCACCTCATGGGATCCAAGTAG
AAAGAGATAAAATTAACAAAATACGGACGTCCTTTGTT
GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
AAAAATTACGGTAGAGCAGTTTATGAATGTCTT

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD108
Sample mark	22RD108-13A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	-

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. BI221230-2

>22RD109-3A ITS2

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GGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCG
GTCGGTTGAAATACAAAAGGGGACCTTCGCATGCTCT
CCGACGGTGGGAGGTTGCGCATCGCGGCCCGCTTCCC
GGGAGGGGTCGCATCCGGCACCGACCGTGC GGAGAGA
TGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCAT
CGAAGCGGGAGTTATTCCCGTCACAGACG

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

Batch ID. BI221230-2

>22RD109-3A_psbA-trnH

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GAGTTTTTTACTGTTGTATTTGAGGATATATAAGGAAT
TTGAATTAGATATGTGCATCCAGCAGGAATTGAACCC
GCGAGTTCGCCAATTATGAGTTGGGCGCTTTAACCAT
TCAGCCATGGATGCTGGAGAAAAGCTCATCCGGAATA
ATCAATTCATTTCGATAATATGAGTGAGTATCGACTTA
GGGTAGCCCAAGTACTCATATCCCAATCATGCCAAACA
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CCGATCTTGCAACACTTGGATTTCTGGAATAAGTCG
CCCACATTCCGTAGGATGAACAGAAAACAACCTTTTT
CTTGAAAGTAATGTTGATTAGATAGATTTTATGGGCG
GACGTAGCCAAGTGGCTCAAGGCAGT

Chloroplast ribulose biphosphate carboxylase large chain (*rbcL*)

Batch ID. BI221230-2

>22RD109-3A_rbcL

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TGCTGAATCTTCTACAGGTACATGGACCACAGTTTGG
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GGGATGTACCATCAAACCTAAATTAGGTCTATCTGCT
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Remarks: observation at nucleotide position 122, 246, 398, 469

Reference Detail

Description of reference material	Specimen of Herba Ephedrae
Scientific name	<i>Ephedra sinica</i> Stapf
Laboratory number	22RD109
Sample mark	22RD109-3A
Locality	Wenquan County, Xinjiang Uygur Autonomous Region, China
Corresponding plant voucher specimen	22RD102, 22RD103, 22RD104, 22RD105
Authenticated	Yes
Remarks	rbcL: 122S, 246Y, 398M, 469Y

Image

Front view



Back view



Reference DNA sequences in FASTA format

Internal transcribed spacer 2 of nuclear ribosomal RNA (ITS2) sequence of plant voucher specimen of *Ephedra sinica* and Chinese Materia Medica (CMM) Herba Ephedrae

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>22RD102-1A ITS2
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AGGGGTGCGATCCGGCACCGACCGTGCGGGAGATGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCATCGAAG
GCGGGAGTTATTCCCGTCACAGACG

>22RD103-1A ITS2
CAAACCACAATTCGCCCCCGGCTCATGTCGTCGGGGGGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCGGT
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AGGGGTGCGATCCGGCACCGACCGTGCGGGAGATGCTGCGCGAGGTTTCCCGATCGGAAAAGGACTTCATCGAAG
GCGGGAGTTATTCCCGTCACAGACG

>22RD104-1A ITS2
CAAACCACAATTCGCCCCCGGCTCATGTCGTCGGGGGGACGGCCTTGACCGTCCGGTCCGCCTCGGCGGTGCGGT
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>22RD105-1A ITS2
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>22RD107-1A ITS2
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>22RD107-5A ITS2
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>22RD107-6B ITS2
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>22RD108-3A ITS2
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>22RD108-11A ITS2

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>22RD108-13A ITS2

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Chloroplast *psbA-trnH* intergenic spacer (*psbA-trnH*) sequence of plant voucher specimen of *Ephedra sinica* and Chinese Materia Medica (CMM) Herba Ephedrae

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>22RD107-5A_psbA-trnH

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