

THOTA

NATURAL SOLUTIONS LLP

Phytochemical Standards

S.No.	Reference Standard/Marker Compound	CAS Number	Specification	Source
1.	Catechin (anhydrous)	7295-85-4	HPLC Purity NLT 98%	<i>Acacia catechu</i>
2.	Epicatechin	490-46-0	HPLC Purity NLT 95%	
3.	Andrographolide	5508-58-7	HPLC Purity NLT 98%	
4.	14-deoxyandrographolide	4176-97-0	HPLC Purity NLT 98%	<i>Andrographis paniculata</i>
5.	Neoandrographolide	27215-14-1	HPLC Purity NLT 95%	
6.	Isoandrographolide		HPLC Purity NLT 98%	
7.	Vasicine	50591-64-5	HPLC Purity NLT 98%	<i>Adhatoda vasica</i>
8.	Vasicinone	486-64-6	HPLC Purity NLT 98%	
9.	Sarasasapogenin	126-19-2	HPLC Purity NLT 95%	<i>Asparagus racemosus</i>
10.	Shatavarin I (or asparoside B)	84633-36-3	HPLC Purity NLT 95%	(Shatavari extract)
11.	Shavararin IV	84633-34-1	HPLC Purity NLT 95%	
12.	Bacopasaponin C	178064-13-6	HPLC Purity NLT 98%	
13.	Bacopaside-I	382148-47-2	HPLC Purity NLT 98%	<i>Bacopa monnieri</i>
14.	Bacopaside II	382146-66-9	HPLC Purity NLT 98%	
15.	Bacoside A3	157408-08-7	HPLC Purity NLT 98%	
16.	Bacopaside X	94443-88-6	HPLC Purity NLT 98%	
17.	Bacosine	198014-94-7	HPLC Purity NLT 98%	
18.	α - boswellic acid (ABA)	471-66-9	HPLC Purity NLT 98%	
19.	β - boswellic acid (BBA)	631-69-6	HPLC Purity NLT 98%	
20.	3-O-Acetyl - β -boswellic acid (BABA)	5968-70-7	HPLC Purity NLT 98%	<i>Boswellia serrata</i>
21.	3-O-Acetyl- α -boswellic acid (AABA)	89913-60-0	HPLC Purity NLT 98%	
22.	3-O-Acetyl-11-keto- β -boswellic acid (AKBA)	67416-61-9	HPLC Purity NLT 98%	
23.	11 - keto - β - boswellic acid (KBA)	17019-92-0	HPLC Purity NLT 98%	
24.	(-)-Epicatechin gallate	1257-08-5	HPLC Purity NLT 95%	<i>Camellia sinensis</i>
25.	(-)-Epigallocatechin gallate	989-51-5	HPLC Purity NLT 95%	
26.	Asiaticoside	16830-15-2	HPLC Purity NLT 98%	<i>Centella Asiatica</i>
27.	Forskolin	66575-29-9	HPLC Purity NLT 98%	<i>Coleus forskohlii</i>
26.	Guggulsterone - E	39025-24-6	HPLC Purity NLT 98%	<i>Commiphore mukul</i>
28.	Guggulsterone - Z	39025-23-5	HPLC Purity NLT 98%	
29.	Lupeol	545-47-1	HPLC Purity NLT 98%	<i>Crataeva nurvala</i>

Communication Address: #2-50-10, Sector-11, 12, M.V.P. Colony, Visakhapatnam - 530017,
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30.	Curcumin	458-37-7	HPLC Purity NLT 98%	<i>Curcuma longa</i>
31.	Bisdemethoxycurcumin (BDMC) [C3]	33171-05-0	HPLC Purity NLT 98%	
32.	Demethoxycurcumin (DMC) [C2]	22608-11-3	HPLC Purity NLT 98%	
33.	Carrotol (Cis dauc-8-en-4 β -ol)		HPLC Purity NLT 98%	<i>Daucus carota</i>
34.	Trans dauc-8-en-4 β -ol		HPLC Purity NLT 98%	
35.	Embelin	550-24-3	HPLC Purity NLT 98%	<i>Embelia ribes</i>
36.	5-O- Methylmbelin	56005-10-8	HPLC Purity NLT 98%	
37.	Gymnemenin	121686-42-8	HPLC Purity NLT 98%	<i>Gymnema sylvestre</i>
38.	Deacylgymnemic acid	22467-07-8	HPLC Purity NLT 98%	
39.	Glabridin	59870-68-7	HPLC Purity NLT 98%	<i>Glycyrrhiza glabra</i>
40.	Glacyrrhizic Acid	1405-86-3	HPLC Purity NLT 98%	
41.	Lysergol	602-85-7	HPLC Purity NLT 98%	<i>Ipomoea hederacea</i>
42.	Lariciresinol	27003-73-2	HPLC Purity NLT 98%	<i>Justicia glauca</i>
43.	Betuline	473-98-3	HPLC Purity NLT 98%	<i>Betula pendula</i>
44.	Betulinic acid	472-15-1	HPLC Purity NLT 98%	
45.	Phyllanthin	10351-88-9	HPLC Purity NLT 98%	<i>Phyllanthus amarus</i>
46.	Hypophyllanthin	33676-00-5	HPLC Purity NLT 98%	
47.	Picoside I	27409-30-9	HPLC Purity NLT 98%	<i>Picrorhiza kurroa</i>
48.	Kutkoside	35988-27-3	HPLC Purity NLT 98%	
49.	Piperine (N-piperoylpiperidin)	94-62-2	HPLC Purity NLT 98%	<i>Piper nigrum</i>
50.	Tetrahydropiperin		HPLC Purity NLT 98%	
51.	Pterostilbene	537-42-8	HPLC Purity NLT 98%	<i>Pterocarpus marsupium</i>
52.	Bakuchiol	10309-37-2	HPLC Purity NLT 98%	<i>Psoralea corylifolia</i>
53.	Psoralen	66-97-7	HPLC Purity NLT 98%	
54.	Isopsoralen/Bakuchicin/Angelicin	523-50-2	HPLC Purity NLT 98%	
55.	Psoralidin	18642-23-4	HPLC Purity NLT 98%	<i>Sesamum indicum</i>
56.	Sesamin	607-80-7	HPLC Purity NLT 98%	
57.	Sesamol	526-07-8	HPLC Purity NLT 98%	<i>Sophora japonica</i>
58.	Rutin	153-18-4	HPLC Purity NLT 98%	
59.	Quercetin	117-39-5	HPLC Purity NLT 98%	

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60.	4-Hydroxy-L-isolucine	55399-93-4	HPLC Purity NLT 95%	<i>Trigonella foenum-graecum</i>
61.	Protodioscin	55056-80-9	HPLC Purity NLT 95%	
62.	12- Deoxywithastramonolide	60124-17-6	HPLC Purity NLT 95%	<i>Withania somnifera</i>
63.	Withaferin A	5119-48-2	HPLC Purity NLT 95%	
64.	Withanolide A	32911-62-9	HPLC Purity NLT 95%	
65.	Withanolide B	56973-41-2	HPLC Purity NLT 95%	
66.	Withanone	27570-38-3	HPLC Purity NLT 95%	
67.	Withanoside IV	362472-81-9	HPLC Purity NLT 95%	
68.	Withanoside V	256520-90-8	HPLC Purity NLT 95%	
69.	27-Hydroxywithanone	871949-32-5	HPLC Purity NLT 95%	
70.	Withanoside VI	362472-82-0	HPLC Purity NLT 95%	
71.	Withanolide D	30655-48-2	HPLC Purity NLT 98%	
72.	(6)-Gingerol	23513-14-6	HPLC Purity NLT 98%	<i>Zingiber officinale</i>
73.	(8)-Gingerol	23513-08-8	HPLC Purity NLT 98%	
74.	(6)-Shogaol	555-66-8	HPLC Purity NLT 98%	
75.	(8)-Shogaol	36700-45-5	HPLC Purity NLT 98%	
76.	Resveratrol	501-36-0	HPLC Purity NLT 98%	<i>Syzygium cumini</i>

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Contract Research Services (CRO)

Phytochemical Analysis & Purification

We provide specialized contract research services for the phytochemical investigation of medicinal plants and natural products. Our expertise covers extraction, isolation, purification, and advanced analytical characterization of bioactive compounds to support research, product development, and quality assurance.

Our Core Services

1. Isolation and Purification of Phytochemicals

We offer comprehensive solutions for obtaining pure bioactive molecules from plant materials:

- Extraction using optimized solvent systems
- Fractionation of crude extracts
- Isolation of phytochemicals using advanced chromatographic techniques
- Purification of bioactive compounds

2. Chromatographic Analysis

We provide precise analytical profiling using state-of-the-art chromatographic methods:

- Gas Chromatography (GC): Analysis of volatile compounds
- High Performance Liquid Chromatography (HPLC): Separation and quantification
- High Performance Thin Layer Chromatography (HPTLC): Fingerprinting and quality control

3. Chemical Profiling of Plant Extracts

Advanced metabolite profiling and compound identification:

- Liquid Chromatography–Mass Spectrometry (LC-MS): Identification of phytochemicals
- Comprehensive chemical fingerprinting

4. Quantification of Bioactive Compounds

Accurate and reproducible quantification using:

- HPLC-based methods
- LC-MS-based analysis

Key Applications

- Herbal drug standardization
- Natural product research
- Nutraceutical and pharmaceutical development
- Quality control of botanical extracts

Specialized Service Packages

1. Herbal Extract Standardization

Scope:

- Extract fingerprinting
- Marker compound identification
- Quantification of active constituents
- Batch-to-batch consistency evaluation

Techniques:

- HPTLC fingerprinting
- HPLC quantification
- LC-MS identification

Typical Project Value:

₹50,000 – ₹3,00,000 per extract

2. Chemical Profiling & Metabolomics

Scope:

- Phytochemical identification
- Metabolite profiling
- Chemical fingerprinting
- Discovery of novel bioactive compounds

Techniques:

- LC-MS
- GC (for volatile constituents)

Typical Project Value:

₹75,000 – ₹4,00,000 per study

3. Isolation & Purification of Bioactive Compounds

Scope:

- Bioactivity-guided fractionation
- Isolation of target compounds
- Purification to analytical or preparative scale

Techniques:

- Column chromatography
- Preparative chromatography
- HPLC purification

Typical Project Value:

₹1,00,000 – ₹8,00,000 per compound (depending on complexity)

Deliverables

- Detailed analytical reports
- Chromatograms and spectra
- Quantitative data
- Compound identification reports
- Purified compounds (for isolation projects)

Turnaround Time

- Routine analysis: 10–15 working days
- LC-MS profiling: 15–20 working days
- Isolation projects: 4–8 weeks

Confidentiality

All samples, data, and results are handled with strict confidentiality and used exclusively for the agreed project scope.