

Birla Institute of Technology and Science Pilani, KK Birla Goa Campus
Department of Biological Sciences

Ref No-BITS/24-25/Tender/SK/002

Date: 24.09.2024

Quotations are invited for the identification and characterization of bioactive compounds/markers and Active Pharmaceutical Ingredients (APIs) present in Sailin-HbS formulation, an Ayurvedic product. The profiling should involve advanced analytical techniques and specific secondary metabolite tests, as detailed below. The quotations should be submitted by 04.10.2024.

Specifications and Technical Details

Study title: Advanced Bioactive Compound/Marker and API Identification in Sailin-HbS, an Ayurvedic Formulation

Objective:

To identify and characterize bioactive compounds/markers and APIs in Sailin-HbS, an Ayurvedic formulation using advanced analytical techniques, with the goal of tracking these markers and APIs during subsequent pharmacokinetic/pharmacodynamic (PK/PD) studies to be conducted as per tender reference no. **BITS/24-25/Tender/SK/002**.

Study title	Advanced Bioactive Compound/Marker and API Identification in Sailin-HbS, an Ayurvedic Formulation
Objective	To identify and characterize bioactive compounds/markers and APIs in Sailin-HbS Ayurvedic formulation using advanced analytical techniques, with the goal of tracking these markers and APIs during subsequent pharmacokinetic/pharmacodynamic (PK/PD) studies.
Study type	Analytical and Metabolite Profiling Study of Sailin-HbS
GLP compliance	Non-GLP
Test item	Sailin-HbS, an Ayurvedic formulation
Physical evaluation	Colour, odour, taste, texture, fracture, extra features, as applicable
Physical and chemical quality analysis	Moisture content, melting point, solubility, ash value, extractive value, choice of solvents, volatile oil content, foreign organic matter content, as applicable
Advanced Analytical Techniques/ Chemical analysis	Structural elucidation should focus on identifying key bioactive compounds, particularly aromatic aldehydes and flavonoids, and others
HPTLC (High-Performance Thin-Layer Chromatography)	Separation, identification, and quantification of bioactive compounds (flavonoids, terpenoids, alkaloids, others)
HPLC (High-Performance Liquid Chromatography)	Precise quantitative analysis of specific bioactive compounds especially aromatic aldehydes (and others) in Sailin HbS formulation
HR-LC/MS (High-Resolution Liquid Chromatography-Mass Spectrometry)	High-precision mass analysis and structural elucidation of bioactive compounds/APIs in Sailin-HbS.
NMR (Nuclear Magnetic Resonance Spectroscopy)	Detailed structural analysis and confirmation of molecular frameworks of identified compounds
FTIR (Fourier Transform Infrared Spectroscopy)	Functional group identification and molecular fingerprinting.
Screening of Secondary Metabolite and APIs	Alkaloid, Anthraquinone, Cardiac Glycosides, Flavonoid, Phenol, Phlobatannin, Pyrrolizidine Alkaloid, Reducing Sugar, Saponin, Steroid, Tannin, Terpenoid, Volatile Oil
Expected Deliverables	
Identification and Characterization Report	A detailed report on the bioactive compounds/markers identified in Sailin-HbS, including their chemical structures, molecular weights, functional groups, and relevant biological activity. Includes chromatograms, spectra, and data interpretations from HPLC, HPTLC, HR-LC/MS, NMR, FTIR, and specified secondary metabolite tests.

Data Interpretation	A comprehensive analysis of the data obtained from HR-LC/MS, NMR, FTIR, and secondary metabolite tests, focusing on the relevance of identified compounds/markers for tracking in PK/PD analysis.
Raw Data Submission	Submission of all raw data from the analytical instruments, including spectra, chromatograms, and related files in their original format. All data should be well-organized and accompanied by metadata for easy interpretation and re-analysis.
Formulation strength (mg/mL)	Appropriately; Compound highly soluble in water and saline
Formulation solvent (preferred)	Normal Saline
Analyte	Sailin-HbS formulation
Study Report	A comprehensive report detailing the phytochemical screening, bioactive compound and APIs identification, of Sailin-HbS, to be prepared and shared in a word document.

Test Compound: Sailin-HbS Ayurvedic Formulation

Eligibility Criteria:

- The Bidder shall provide the Registration number of the firm along with the GST and the PAN Number issued by the concerned authorities.
- Separate technical and price bids should be provided on company letterhead duly signed by an authorized signatory.
- The Technical Bid must contain a Technical Compliance sheet with details of the experimental protocols and methods for the bioactive compound profiling. Any published catalogue/experimental protocol/manufacture website as proof for compliance, if available, should be provided for each technical point. The technical bid should mention the time necessary for each experiment.
- List of customers for whom similar studies were performed by the company should be provided.
- Price Bids should contain the prices, terms of delivery, sales, payment terms, etc.
- The bidder must not be blacklisted by any government or private organization. A certificate or undertaking to this effect must be submitted.

No Commitment to Accept Lowest or Any Tender:

- Birla Institute of Technology and Science Pilani, KK Birla Goa Campus shall be under no obligation to accept the lowest or any other offer received in response to this tender notice and shall be entitled to reject any or all offers. The Institute will not be obliged to meet and have discussions with any vendor or to listen to any representations.

Price Quotation:

- Comprehensive price (INR) to be quoted which includes all necessary pricing and taxes.
- Vendor will need to provide a bank guarantee in lieu of advance payment.

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