

**Towards Commercialization: Pilot Production of NIPRINEEM™ Tea and NIPRINEEM™
Oil from *Azadirachta indica* (Neem) in Nigeria**

BUDGET

S/N	Activity	MATERIALS	COST ESTIMATE (₦)
1.	Collection and processing of raw materials	Collection tools, seeds, wares etc	2,000,000
2.	Industrial scale plant material drying and processing facility -Specifications: Special multilayer belt design making material heated uniformly and continuously improving drying efficiency. Drying area: 45m ² , working temperature: 0-120°C, Drying time: 0.1-5h, Total power: 19.2Kw, Capacity: 200kg/h	Purchase, installation and training	45,000,00
3.	Maintenance of Cultivated Neem plantation	Seedlings, land preparation, weeding, manures, plantation maintenance, labourers, etc.	5,000,000
4.	Extraction neem oil	Solvents, etc	2,000,000
5.	Fix oil extraction machine for pilot scale -Specifications: Cold and hot press, Motor power - 18.5+5.5Kw+80w, - Capacity: Cold and hot press oil extraction of variety of seeds and nuts such neem seeds, Cotton Seeds, Groundnuts / Peanuts / Earthnuts, Sunflower Seeds etc. with feeding capacity of 20kg to 100kg/day	Purchase, installation and training	45,000,000
6.	Pilot Scale tea bag making machine - Specifications:(L*W*H)1750*740*1950mm, Input power- 220V/50Hz single phase - Capacity: Packaging speed -28-50bag/min,	Purchase of teabag packaging and sealing machine, installation and training	45,000,000
7.	Generating quality standards for raw material and products. <ul style="list-style-type: none"> Phytochemical analysis (Quantitative and quantitative 	Solvents, reagents, glassware, culture media, standards, laboratory animals, dissecting sets, slides, etc	10,000,000

	<p>estimation of marker compounds by HPLC, GCMS, TLC, etc.)</p> <ul style="list-style-type: none"> Pharmacognostic and physicochemical evaluation (Organoleptic, Macroscopic and Microscopic Evaluation, ash value, extractive values, moisture content, loss on drying, etc. Antimicrobial screening and quality assessment (microbial load of the herbal tea and seed oil samples, susceptibility of the samples to test microorganisms, minimum inhibitory concentrations and minimum bactericidal concentration of the samples) Toxicological profile of Neem tea and Oil (oral acute toxicity, oral sub-chronic and chronic toxicity, acute dermal toxicity and repeated dose dermal toxicity) 		
8.	Formulation and stability Studies (Dosage form for tea bags, Pre formulation studies, Stability studies: pH, Specific gravity, Refractive index: Thermal stability, Moisture content, Degradation of product, Physicochemical profile, Ash content, Flow rate/angle of repose, Determination of bulk and tapped density: Carr's index and Hausner ratio, Solubility, Viscosity).		5,000,000
9.	Production of NIPRINEEM Products.	Disposables: hand gloves, head cap, lab coats, wares, consumables, etc, bottles, teabags, packs, labels, cartons, etc	5,000,000
10.	Listing with NAFDAC following NAFDAC approved process and procedure.		1,500,000

11.	Logistics, secretariat	Stationaries, communication, transportation,	5,000,000
12.	Collation of results and report writing	Data management, analysis, report dissemination etc	2,000,000
	Subtotal		172,500,000
13.	Miscellaneous	5%	8,625,000
14.	Administrative charges	10% of total cost	17,250,000
	Grand total		198,375,000