

International Buyer-Seller meet on Herbal and Medicinal plants at Arogya International

Hayleys Agro Biotech Ltd
Sri Lanka

October 28th 2007



Regulatory and Quality Expectations of Buyers from Sri Lanka

Medicinal and Aromatic Plant Extracts



Sri Lanka

History of Medicinal Plant Industry in Sri Lanka

- ❑ Ayurveda medical system established in Sri Lanka 500 BC
- ❑ Most of the Indian medicinal plants introduced to Sri Lanka
- ❑ Indigenous Sri Lankan plants too – large bio-diversity
- ❑ Traditionally medicinal plants from wild collection – shift towards contract farming
- ❑ Commercial cultivation of spices started 500 years ago
- ❑ Present situation
 - ✓ over 12,000 Ayurveda medical practitioners
 - ✓ over 1,000 Ayurveda hospitals
 - ✓ Few large Sri Lankan manufacturers of finished products
 - ✓ Few large Indian brands present
 - ✓ Many exporters of spice and herbal products
 - ✓ Opportunities for consolidated marketing within SAARC

What can Sri Lanka contribute to the industry

- ☐ **High annual rain fall >1270 mm**
- ☐ **24-32°C average temperature**
- ☐ **Ideal agro climatic conditions for high quality herbs and spices**
- ☐ **Farmers with good agricultural experience**
- ☐ **Cultivating lands free of Pesticidal residues**
- ☐ **Organic farming practices**
- ☐ **Wide spread contract farming system**



Hayleys Ltd

- Established in 1878
- One of the largest Sri Lanka multinational companies
- Pioneer in Agriculture & Agri business
- Involved in Global Manufacturing, Transportation, Textiles, Plantations, Infrastructure and Consumer and Leisure.
- Accounts for 2.7% of Sri Lanka's export income, 2.2% GDP
- Composed of 136 companies in 18 countries and 26,000 employees.
- Website: www.hayleys.com



Regulatory Affairs in Herbal Products

☐ **Administered by-**

**Department of Ayurveda,
Ministry of Indigenous Medicine
Sri Lanka**

☐ **Web site ([www. ayurveda.gov.lk](http://www.ayurveda.gov.lk))**

Regulations for Importing Herbal Products into Sri Lanka

REQUIREMENTS

- ☐ Country of Origin
- ☐ Product category
- ☐ Company profile
- ☐ Registered Sri Lankan counterpart
- ☐ Authenticity of the information of raw material
- ☐ Technical Documentation

REGISTRATION PROCEDURES

- ☐ Completed application form (original and 6 copies) to be forwarded to the Ayurvedic Drugs Formulary Committee
- ☐ Submit 8 samples
- ☐ Processing period -1 ½ - 3 months
- ☐ Sri Lankan counterpart needs to employ a Registered Ayurvedic Physician
- ☐ Every import requires approval from the Department of Ayurveda / Import Licence
- ☐ Fees – New product –SLR 25,000
 - Sample test per import – SLR 3,000

Quality Parameters Required

- ☐ Biochemical composition of all the ingredients
- ☐ Weights and ratios of plant extracts
- ☐ Solvent residual level
- ☐ Heavy metal residual level
- ☐ Pesticide residual level
- ☐ Microbial level

High Active Ingredient Levels of Sri Lankan Herbs and Spices

Name of the Plant	Active principle	in Plant (dry) %	In Essential oil %
Clove	Eugenol	10.3	79.2
	Eugenol acetate	1.4	10.4
Black Pepper	Pinene ($\alpha + \beta$)	0.58	25
Cardamom	Cineol	3.0	60
Nutmeg	Sabinene	1.6	44
Garcinia	HCA	10	60

Medicinal Plants from Sri Lanka



Garcinia cambodia



Centella asiatica



Phyllanthus amarus



Bacopa monerii

Medicinal Plants from Sri Lanka



Hayleys Agro Biotech Project



ISO 22000 + HACCP certified project

QA Management



**HPLC &
HPTLC analysis**



**Rotary
evaporator,
GC analysis
& microbial
analysis**



Hayleys Agro Biotech products

Garcinia extract

- Sinhala- Goraka
- English- Garcinia
- Botanical- *Garcinia cambodia*
AI - Hydro citric acid



Centella extract

- Sinhala- Gotukola
- English- Gotukola
- Botanical- *Centella asiatica*
AI - Asiaticoside



Adathoda extract

- Sinhala- Pawatta
- English- Adathoda
- Botanical- *Adathoda vasica*
AI - Vasicine



Phyllanthus extract

- Sinhala- Pitawakka
- English- Phyllanthus
- Botanical- *Phyllanthus amarus*
AI - Phyllanthine



Cinnamon Oil & Oleo-resin

- Sinhalese- Kurundu
- English-Cinnamon
- Botanical- *Cinnamomum verum*
Family: Lauraceae



Cardamom Oil & Oleo-resin

- Sinhala- Enasal
- Botanical-*Elettaria cardamomum*
- English-Cardamom
- Tamil- Anji
- Family- Zingiberaceae



Clove Oil & Oleo-resin

- Sinhala- Karambu
- Botanical-*Eugenia caryophyllus*
- English-Clove
- Family-Myrataceae



Black Pepper Oil & oleo-resin

- Sinhala- Gammiris
- Botanical-*Piper nigrum*
- English-Pepper
- Family- Piperaceae



Example of QA information of Sri Lankan Herbal products

Nutmeg Essential oil

Active Ingredient	Sample results	Standard Limits
α -Pinene	12.6%	10-14%
B -Pinene	9.9%	9-12%
Sabinene	43.8%	42-45%
Specific gravity	0.87	0.85-0.92
Optical rotation	38.2	21-42.5
Refractive Index	1.47	1.46-1.48
Solubility in Ethanol	Meets requirement	
Hg+2	Below the limits	
Cd+2	Below the limits	
Pb+2	Below the limits	
Colour	White in colour	



Thank you