



HMRLignan™

Purified Ingredient


Natural Pharma Solutions

HMRLignan™

(7-Hydroxymatairesinol)

Purified Ingredient from Picea abies knots

NLT 90% 7-Hydroxymatairesinol potassium acetate complex



Uses

The Norwegian spruce extract is a new generation of **lignan complexes** in **aglycone form** that provides a highly bioavailable supplement and a more digestible alternative to natural sources. It has a **superior bioavailability** and **proven pharmacokinetic properties**, and can be efficiently transformed into enterolactone

The lignans in the Norway Spruce extract **act like oestrogen**, and positively influence the oestrogen balance in the body, which helps to control the severity and frequency of the symptoms of the menopause

This seems to play an important role in their reported prophylactic action against **cardiovascular diseases and tumours**

Key

 Food supplement Ingredient

Linnea Extracts

The philosophy of Excellence

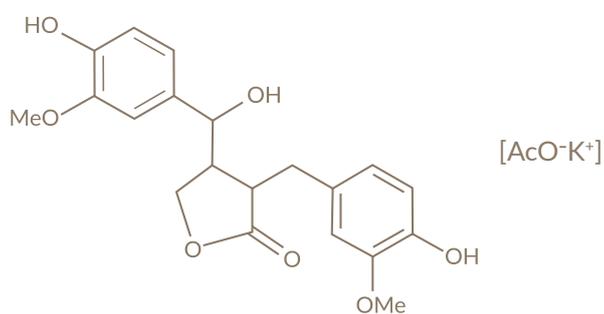
- **Norwegian** spruce knots variety, studied by Turku University
- The knots are sourced in **Europe**
- **Linnea** works with forestry commissions using a special process to separate the knots from the wood
- Low environmental impact
- Full control over the quality of the green wood

7-hydroxymatairesinol, also known as HMR, was firstly isolated by researchers in Finland

Linnea is currently the only manufacturer of Norwegian spruce extract

Technical Description

Name of the plant	Picea abies L.
Part of the plant used	Wood knots
Name	4-[Hydroxy(4-hydroxy-3-methoxyphenyl)methyl]-3-(4-hydroxy-3-methoxybenzyl)-dihydrofuran-2(3H)-one-potassium acetate adduct
CAS number	Not assigned
Molecular weight	374.39 g/mol (HMR) + 98.14 g/mol (AcOK)
Appearance	Off-white crystalline powder
Solubility	Soluble in ethanol: water 1:1. Practically insoluble in water and hexane
Storage	Preserve in tight container, protected from light, heat and humidity



Analytical Description

Water content: KF	NMT 10%
Assay	Not less than 90% (Hydroxymatairesinol + allo-isomer + potassium acetate)
Related substances	NMT 7 % (Matairesinols)

Discover Linnea's full range of Botanical Products:

 Butylscopolamine

 5-HTP

 Cannabis-Hemp

 Vinpocetine

 HMRLignan™

 Ginkgo biloba

 Vincamine

 Bilberry

 Red Clover

Linnea's Certificates



High level of compliance with GMPs in product manufacturing

GMP compliance certified by



GMO free



Allergen, Gluten, Lactose, Melamine Free



Vegan certified



Kosher certified



Halal certified

No materials containing engineered nanomaterial are used in the manufacturing process and the product is not irradiated. The raw material, intermediates and auxiliary compounds are free from pesticides, dioxin and aflatoxins.

Manufactured by



Headquarters

Linnea SA
Via Cantonale
6595 Riazzino
Switzerland
T +41 91 850 5050
F +41 91 850 5070
info@linnea.ch
www.linnea.ch

US office

Linnea Inc.
19700 Fairchild Road, Suite 380, Irvine,
CA 92612
USA
T +1 949 502 5760
F +1 732 875 0306
tmcMahon@linnea.ch
www.linnea-us.com