

Summary of the dossier: 7-hydroxymatairesinol (HMR) potassium acetate complex

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This application for authorisation of a novel food in accordance with Regulation (EU) 2015/2283 concerns 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™), an off-white crystalline powder of 7-hydroxymatairesinol (HMR) potassium acetate adduct. 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) is constituted of not less than 90% Hydroxymatairesinol potassium acetate adduct + other lignans and not more than 10% other lignans. Linnea HMRLignan™ will be marketed for use in food supplements in Europe, as it is already marketed in the USA as dietary supplement. It will be consumed as one or two oral capsules per day corresponding to 72-144 mg of HMRLignan™. The product is for the general population. All the specifications of 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) are detailed in this application and are in accordance with European standard and regulations. Analyzes have demonstrated the lack of various contaminants: heavy metals, microbiological contaminants, PCB/dioxins, mycotoxins, among others.

The production process is fully described. HMRLignan™ is produced in Switzerland by Linnea, extracted and purified from Norway spruce (*Picea abies*, [L.] H. Karst.) knots. HMRLignan™ has already been approved in 2004 by the US FDA through a New Dietary Ingredient Notification (NDIN) for 7-Hydroxymatairesinol (HMR) Potassium Acetate Complex. For more than 12 years 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) is marketed and consumed in the US as a food supplement by adults.

Regarding safety of 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™), this is hugely substantiated. Genotoxicity studies (AMES, chromosome aberration in vitro and rat micronucleus tests) indicate lack of genotoxicity. The LD50 has not been reached since all animals tolerated HMRLignan™ well at doses up to 2 g/kg per day (for 14 days). In 28-day repeated dose toxicity studies in rats and dogs (967 mg/kg per day and 695 mg/kg per day, respectively) no treatment-related toxicity was observed. In 90-day repeated dose oral toxicity study in rats, the NOAEL was set at 0.25% in feed corresponding to 160 mg/kg body weight/day and dose up to 2600 mg/kg showed no adverse events. In prenatal developmental toxicity study in rats the NOEL for developmental effect was at least 4% in the diet corresponding to 1190 mg/kg body weight/day. Finally in human studies, HMRLignan™ has been given in single doses at 1200 mg and up to 1350 mg/d for 4 weeks to healthy male volunteers without treatment-related adverse events, as well as in healthy postmenopausal women doses up to 72 mg/d for 8 weeks were safe and well tolerated. The last clinical and animal studies show safe use of HMRLignan™ in subjects treated for 3 months with 72 mg or 144 mg as well as in mice treated for 60 days with 3 mg/kg. Note while EFSA is used to calculate the safe Human dose from the NOAEL applying a 200 margin of exposure factor, corresponding here to 56 mg HMRLignan™ per day for a 70 kg Human with a NOAEL of 160 mg/kg, Human studies show safe use of HMRLignan™ at higher doses: 1200 mg acute, 1350 mg for 4 weeks, 36 and 72 mg for 8 weeks and 72 and 144 mg for 12 weeks. HMRLignan™ can be safely used at 72-144 mg per day in food supplements. Regarding allergenicity, the risk of allergic reaction with 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) is very weak since it contains less than 1% protein and Human data show no adverse event.

In conclusion, 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) is well characterized and compliant with European Regulations. The product is safe and devoid of allergic potential. 7-hydroxymatairesinol (HMR) potassium acetate complex (called HMRLignan™) does not present consequently any potential hazard to the European population.