
PLANT - BASED SQUALANE COMPOSITIONS FOR APPLES AND PEARS TO REDUCE SURFACE SCALDING

Surface scalding is a physiological disorder occurring mostly in apples and pears. It is one of the most common problems during post-harvest and storage, as well as being the cause of rejection of these fruits by international shipments. University of Talca research team, led by Carolina Torres, PhD. in Horticulture, have succeeded in developing a new natural anti-scalding for pears and apples. Currently, a potentially marketable formula is available in the short term for pears, 100% natural, highly effective to prevent surface scalding during long storage with beneficial effects for fruit quality and condition. Plant-based Squalane compositions for apples and pears, which help to prevent surface scalding (oxidation) of pears and apples during post-harvest and storage stage.

CURRENT DEVELOPMENT STAGE TRL 7

Validated at pre-commercial scale in operating environment. Provides greater firmness and colour to fruit. The new anti-scalding has been validated to semi-industrial scale in Chile and the United States, in pears and apples. Tests were performed under controlled atmosphere (AC) as well as in conventional cold (FC).

TECHNOLOGY



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PROTECTION

PCT APPLICATION

Application number: PCT/CL2017/050010
 Publication number: WO2018161184A1
 Application date: **08 Mar 2017**

PERÚ APPLICATION

Application number: 001787-2019/DIN
 Publication number: -
 Application date: **28 Aug 2019**

ARGENTINA APPLICATION

Application number: ARP20170103044
 Publication number: AR110032A1
 Application date: **08 Nov 2017**

EUROPE APPLICATION

Application number: 17900213.4
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 Application date: **27 Aug 2019**

CHILE APPLICATION

Application number: CL201902351
 Publication number: -
 Application date: **20 Aug 2019**

USA APPLICATION

Application number: 16/490,046
 Publication number: -
 Application date: **28 Aug 2019**

COMPETITIVE ADVANTAGE

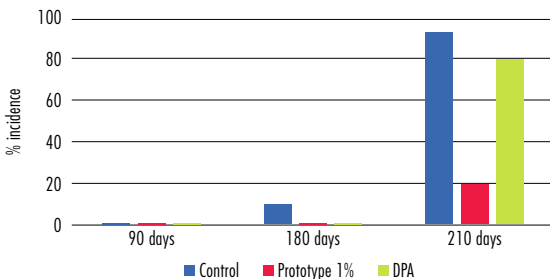
Active ingredient (a.i.), plant-based Squalane (antioxidant) is readily available through identified suppliers. Low ethylene production. Preserves fruit organoleptic properties. Prevents the appearance of other physiological disorders. Highly effective preventing surface scalding (76% to 100% control) under various storage conditions for apples and pears. Additional positive effects on fruit quality (colour, firmness, lower ethylene production, texture and overall appearance). Applied postharvest. It may be commercialized as “plant-based antioxidant coating”, potentially reducing regulatory requirements.



Control

Prototype

Packham's Triumph, Chile, 2017. Commercial application (full bins)
 RA Storage



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