Gmail **Harold jitschak Bueno de mesquita <bdmesq@gmail.com>**

Would you like to improve drastically your singing-capacity? Voila!

2 messages

harold jitschak bueno de mesquita <bdmesq@gmail.com>
To: yg <bdmesqgroup@yahoogroups.com>

Tue, Jul 30, 2013 at 5:33 PM

Specially bred canary seeds celiac safe, find scientists

By Kacey Culliney , 25-Jun-2013 **1 comment**

Canary seeds previously unsuitable for human consumption found to be gluten-free and highly nutritious

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Related tags: Celiac-safe, Canary seeds, Immunoblotting, Gluten-free, Celiac disease, Gluten,Wheat, Rye, Barley, Mass spectrometry, Allergens, Cookies, Cakes, Flat bread, Nutrition, Protein

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A new variety of hairless canary seed specifically bred for human consumption qualifies as gluten-free, scientists find.

The study published in the *Journal of Agriculture and Food Chemistry*investigated the gluten properties and cross-reactivity of a canary seed variety bred without hairs that is therefore suitable for human consumption.

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The Researchers from Canada said the glabrous (hairless) canary seed from the Poaceae (Gramineae) family could serve as an alternative source of gluten-free cereal grain.

Celiac-safe thrice…

The study found the canary seeds to be celiac-safe using three different testing methods – mass spectrometry (MS), bioinformatics, and immunoblotting.

These methods were used to assess the homology of glabrous canary seed proteins with those from known gluten sources – wheat, barley and rye.

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***"All three techniques used in this study were negative for gluten; thus these methods could be used to support gluten-free labeling of products that contain glabrous canary seeds,"* the researchers wrote.**

MS showed the likely presence of proteins homologous with rice, oat, corn, carrot, tomato, radish, beet, and chickpea, they said, but no presence of celiac-related gluten fragments from wheat, rye, barley or other derivatives were found.

The immunoblotting studies confirmed the absence of gluten, they added.

Cookies, cakes and flat breads

The study found that canary seed flour could be used at 100% in cookies, cakes and flat breads.

However, for regular loaf bread it can only be used to replace 25% if manufacturers wish to maintain the same volume, crust and color.

Use of canary seed flour in baked goods at 100% would enable use of a CODEX gluten-free label, the researchers said.

High protein and nutritious

The study also noted that canary seeds are highly nutritious compared to wheat with more protein than other common cereals.

***"Canary seed is a richer source of most required minerals relative to wheat,"* the researchers said.**

Glabroush canary seed contains an average of 24% protein, 8% crude fat, 56% starch and 7% total dietary fiber. Phytate levels are about twice that of wheat and there are smaller amounts of soluble sugars and ash in this grain.

The study cited previous research that found hairless canary seed also has higher levels of phosphorous, sulfur, magnesium, calcium, iron, manganese, and zinc than wheat or oat.

"Thus, from a nutritional perspective, glabrous canary seed could be a good source of macronutrients such as protein and fiber as well as a source of some important micronutrients including phenolic compounds and carotenoids," **the researchers wrote.**

Cross-contamination warning

Researchers did warn that production and processing of the canary seeds would have to be carefully monitored to avoid cross-contamination from gluten-yielding grains.

"As glabrous canary seed is likely to be grown in close proximity to other gluten-containing crops such as wheat, rye, and barley, the risk of cross-contamination during production, harvesting, and processing can be high if appropriate allergen management practices are not used. Food processors interested in using this grain in gluten-free foods would need to ensure that the grains are appropriately managed through production, transportation, and primary processing in order to ensure that they remain 'gluten-free'."

This project was funded by the Canaryseed Development Commission of Saskatchewan. [me: !!??]

Source: ***Journal of Agriculture and Food Chemistry***
Published online, doi: 10.1021/jf305500t
"Analysis of Glabrous Canary Seeds by ELISA, Mass Spectrometry, and Western Blotting for the Absence of Cross-Reactivity with Major Plant Food Allergens"
Authors: Jl. Boye et al.

prpbirdseeds prpcanary prpgluten

Rivka Shames <rivka.shames@gmail.com> Wed, Jul 31, 2013 at 10:24 AM
To: harold jitschak bueno de mesquita <bdmesq@gmail.com>

Dear dr. Bueno de Mesquita,

What is the connection between canary seeds and singing capacity?
And if there is, how can we use the seeds for increasing the singing capacity?

Thank you in advance,

Rivka Shames

P.S. Are there any telephone consulting hours?

2013/7/30, harold jitschak bueno de mesquita <bdmesq@gmail.com>:
> Specially bred canary seeds celiac safe, find scientists
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>
> *This project was funded by the Canaryseed Development Commission of
> Saskatchewan. [me: !!??]*
>
> * *
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> *Source: Journal of Agriculture and Food
> Chemistry<http://pubs.acs.org/doi/abs/10.1021/jf305500t?prevSearch=canary%2Bseed&searchHistoryKey=>
>
> Published online, doi: 10.1021/jf305500t
> “Analysis of Glabrous Canary Seeds by ELISA, Mass Spectrometry, and Western
> Blotting for the Absence of Cross-Reactivity with Major Plant Food
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> Authors: JI. Boye et al.*
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