Aspergillus acidus from Puerh tea and black tea does not produce ochratoxin A and fumonisin B-2

Aspergillus acidus from Puerh tea and black tea does not produce ochratoxin A and fumonisin B-2

Puerh tea is a unique Chinese fermented tea. Unlike other teas it is stored for a long period of time. Aspergillus niger is claimed to be the dominant microorganism in the Puerh tea manufacturing process and also to be common on tea in general. A. niger sensu stricto is known to produce the mycotoxins ochratoxin A, fumonisins B-2 and B-4. With this in mind, we performed a preliminary study to determine if production of these mycotoxins by black Aspergilli isolated from Puerh and black tea can occur. An examination of 47 isolates from Puerh tea and black tea showed that none of these was A. niger. A part of the calmodulin gene in 17 isolates were sequenced, and these 17 isolates were all identified as Aspergillus acidus (=A. foetidus var. acidus). The rest of the 47 isolates were also identified as A. acidus from their metabolite profile. Neither production of ochratoxin A nor fumonisins B-2 and B-4 by any of the 47 isolates were observed.

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