

**Title** Detection of *Aspergillus* spp. and aflatoxin B<sub>1</sub> in rice in India  
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#### **Abstract**

Twelve hundred rice samples consisting of paddy (675) and milled rice (525) were collected from 20 states across India. These samples were assessed for *Aspergillus* spp. infection on selective medium and aflatoxin B<sub>1</sub> (AFB<sub>1</sub>) by indirect competitive ELISA. In this investigation, *Aspergillus flavus* contamination dominated in all the seed samples. The other major contaminants were *Aspergillus niger*, *Aspergillus ochraceus* and *Aspergillus parasiticus*. Out of 1200 rice samples, 67.8% showed AFB<sub>1</sub> ranging from 0.1 to 308.0 µg/kg. All the paddy samples from Chattishgarh, Meghalaya and Tamil Nadu showed AFB<sub>1</sub> contamination. Milled rice grains from different states showed below the permissible levels of AFB<sub>1</sub> (average 0.5–3.5 µg/kg). Eighty-two percent of samples from open storage that were exposed to rain showed AFB<sub>1</sub> contamination followed by one-year-old seed. Out of 1200 samples, 2% showed AFB<sub>1</sub> contamination above the permissible limits (>30 µg/kg). This is the first comprehensive report of aflatoxin contamination in rice across 20 states in India.