

What do you want Organic Moong Daal or Heavy Metals?



After Organic Rice, Toxic Pesticides and Heavy Metals in Organic Moong Dal

Pesticide residues found in 3 of 7 brands tested, heavy metals in all brands

Consumers believe organic food products are safe and good for health. Consumers are willing to pay that extra amount to buy them. But when a staple like organic moong dal, which is widely used in India, has pesticides and heavy metals consumers feel cheated and alarmed.



Ahmedabad based Consumer Education and Research Centre (CERC) tested 7 organic for safety parameters – presence of heavy metals and pesticide residues. The test report reveals that out of 7 brands of organic moong dal, pesticide residues were present in 3 brands and all 7 contained heavy metals in varying amounts. Earlier, CERC Test Report on Organic Rice, published in *Grahak Sathi* (February–March 2017) had made similar shocking revelations. Six of 7 brands of organic rice had pesticide residues and all 7 brands contained heavy metals.

Brands Tested

- Fabindia Organics
- Sanjeevani Organics
- 24 Mantra Organic
- Organic Tattva
- Morarka Organic Down to Earth
- Vikalp Organic Product
- Organic on Call

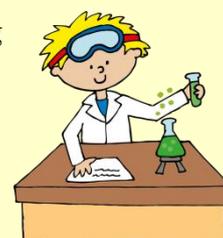


CERC Tests

The brands were tested for safety parameters - presence of heavy metals and pesticide residues. The 3 heavy metals tested were – lead, copper and arsenic. CERC tested the products for 16 pesticides - 5 of the organochloride group and 11 of the organophosphate group. Of these, 14 were not detected in any of the brands. The two detected belonged to the organophosphate group.

Pesticide Residues

Trace levels of pesticide residues were present in 3 out of 7 brands of organic moong dal. The pesticides found were chlorpyrifos and chlorfenvinphos. They are not in the US list of pesticides permitted in organic products. The brands in which they were detected were *Morarka Organic*, *Organic on Call* and *Vikalp Organic Product*. (See table for detailed results.)



As is known, over a long duration, even microscopic quantities of pesticides can harm as they get accumulated in the body. Chlorpyrifos, detected in two brands, has been linked to delays in learning, reduced physical coordination and behavioural problems in children. Chlorfenvinphos, detected in three brands, is an insecticide which, if ingested, can affect the central nervous system adversely.

Heavy Metals

Varying amounts of lead, copper and arsenic were found in the brands. Lead levels ranged from 0.07-0.38 mg/kg, copper ranged from 2.02-6.00 mg/kg and arsenic ranged from 0.08-0.43 mg/kg. (See table for detailed results.)



Lead is a toxic metal hazardous for children. It can accumulate in the body and harm almost every organ system. Hence, even low levels of exposure can be harmful. Very large single or long-term intakes of copper may cause male infertility. Long-term exposure to arsenic from food can cause cancer and cardiovascular disease.

Test Results: Organic Moong Dal

Brands	Rank ¹	Overall Score ²	Price/ 500 g (Rs.)	Pesticides (mg/kg) ³		Heavy metals (mg/kg) ⁴		
				Chlorpyrifos NMT ⁵ 0.05	Chlorfenvinphos NMT 0.025	Lead NMT 2.5	Copper NMT 30	Arsenic NMT 1.1
<i>Fabindia Organics</i>	1	98	160	ND ⁶	ND	0.08	5.02	ND
<i>Sanjeevani Organics</i>	1		127	ND	ND	0.10	5.38	ND
<i>24 Mantra Organic</i>	2	97	140	ND	ND	0.07	5.85	0.08
<i>Organic Tattva</i>	3	91	125	ND	ND	0.38	2.02	0.43
<i>Morarka Organic Down to Earth</i>	4	83	136	ND	0.011	0.07	6.00	0.10
<i>Vikalp Organic Product</i>	5	75	100	0.012	0.012	ND	4.83	0.10
<i>Organic on Call</i>	6	72	-	0.015	0.014	0.09	4.88	ND
Weightage (%)				30	30	15	10	15

NOTES

¹ Ranks are based on overall scores and prices have not been considered in determining rank

² Overall scores were calculated by giving weightages as shown in the table

³ and ⁴ Limits set as per the Food Safety and Standards (Contaminants, Toxins & Residues) Regulations, 2011 for conventional moong dal.

Less was considered better in both pesticide residues and heavy metals

⁵ NMT= Not more than

⁶ ND=Not Detected

How can the limits be the same?

Since there are no specific standards for organic food in India at present, CERC tested the samples as per the limits set by the Food Safety and Standards (Contaminants, Toxins & Residues) Regulations, 2011, for conventional moong dal.

The levels of pesticides and heavy metals in the organic moong dal brands were within the limits prescribed for conventional moong dal. But how can be the same limits for organic food and conventional food? The very rationale for buying organic food for a consumer is buying a product free of pesticides and other harmful elements.



FSSAI launches logo, portal for organic food products

The Food Safety and Standards Authority of India (FSSAI) recently unveiled a logo for organic food products - Jaivik Bharat - along with the Food Safety and Standards (Organic Foods) Regulations 2017. Under these regulations, organic foods are required to comply with the requirements of National Programme for Organic Production (NPOP) or Participatory Guarantee System for India (PGS-India) of the Ministry of Agriculture and Farmers Welfare. However, direct sales of organic food by small farmers, producers or producer organisations to the end-consumer is exempt from this requirement. The regulations will come into effect on July 1, 2018. With respect to standards on residues of insecticides, organic food will have to comply with much stricter standard of 5% of the limit for non-organic food.

FSSAI action inadequate

Based on its findings in earlier tests, CERC had urged the Food Safety and Standards Authority of India (FSSAI) to set mandatory standards specifically for organic foods. CERC welcome FSSAI's recent move to make insecticide limits more stringent for organic foods as a step in the right direction. However, CERC do feel it is too little.

Why has FSSAI restricted itself to insecticides? Why not set stringent norms for pesticides and heavy metals as well? FSSAI's non-inclusion of these critical culprits is mystifying. It is difficult to understand the rationale behind FSSAI giving exemption to direct sales of organic food to the end-consumer by small farmers, producers or producer organisations. If small farmers and producers do not have to follow the regulations won't this hurt the consumer?

Variety of logos

While the intention behind multiple certifications and logos is to assure quality by the manufacturer, it could be confusing for consumers. For instance, *Sanjeevani* had five certifications!

How the brands performed

To enable consumers to make an informed choice, CERC compared the test results for organic moong dal and organic rice. The brands were the same. *Sanjeevani Organics* and *24 Mantra Organic* showed a better overall performance in moong dal than in rice. As far as individual safety parameters go, all the brands contained lead and copper in amounts similar to that in organic rice. *Fabindia Organics* was the most consistent in performance and fared well in both moong dal and rice.



Manufacturers' response

As a policy, CERC conveys the test results to all the manufacturers and await their response. CERC received the following responses relevant to organic moong dal:

Sanjeevani Organics said that organic certification was done for the practices and processes and not for the products.

CERC response: “Consumers are concerned not with processes and practices, but with the end product. Certification for processes must reflect in the quality of final product.”



Organic Tattva said that as per APEDA (Agricultural and Processed Food Products Export Development Authority) guidelines, there is no requirement for testing of heavy metals for organic products.

CERC response: “True. However, we have tested for them as consumers should be concerned about their presence in foods. Heavy metals accumulate in the human body over a period of time and cause harm.”

Areas of action

CERC have made a representation to FSSAI urging it to:

- Formulate stringent limits for pesticides and heavy metals in organic foods
- Ensure that small farmers, producers or producer organisations who sell directly to the end-consumer not be given exemption from following the regulations
- Ensure that NPOP extends to product certification
- Regularly monitor organic food quality, including that sold online
- Closely monitor advertising claims made by organic food manufacturers



Grahak Sathi's conclusion

The objectives of the testing were to investigate whether organic brands of moong dal are safer and healthier to consume compared to the non-organic brands. The test findings proved that this is not so. Also, organic moong dal is much more expensive.



A comparison of the 7 organic brands shows that Sanjeevani Organics and Fabindia Organics (higher in price) both obtained the highest overall score as they had no pesticides and heavy metals were within limits.

Source: Grahak Sathi, Decmber – January 2018, Volume 3, Number 4
<http://cercindia.org/feb-18-cover-story/>