

Nuclear Magnetic Resonance Spectroscopy Test

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In news

Recently, Centre for Science and Environment alleged in a report that the ten leading Indian brands of honey including Dabur, Patanjali have failed a Nuclear Magnetic Resonance Spectroscopy (NMR) test

Key highlights of the report

- According to the Centre for Science and Environment(CSE) report the brands have failed a Nuclear Magnetic Resonance Spectroscopy **(NMR) test** which the **Indian government had made mandatory for exports starting August 1, 2020.**
- The report named only three out of the 13 brands – Saffola, Markfed Sohna and Nature's Nectar – as those which have passed the lab tests
- The report also said investigations with laboratory studies in India and Germany reveal the adulteration, with 77% samples found to be adulterated with sugar syrup, adding that of 22 samples tested, only 5 passed all tests.

What is Nuclear Magnetic Resonance Spectroscopy (NMR) test?

- NMR is an analytical chemistry technique used in quality control and research for determining the content and purity of a sample as well as its molecular structure
- It can also provide analytical data regarding the type, quantity and arrangement of atoms in chemical systems, liquids and solids
- Nuclear Magnetic Resonance Spectroscopy (NMR) analysis applications are:

- Chemical structure analysis of liquids and dissolved solids
- Deformulation of products
- Quantification of mixture components
- Kinetic and temperature studies of reaction mixtures
- Characterization of polymers, including structure, co-monomer ratios, end groups, average molecular weight.