

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH**

**LOK SABHA
STARRED QUESTION NO. *74
(TO BE ANSWERED ON 05-02-2021)**

GREEN CRACKERS

***74. DR. (PROF.) KIRIT PREMJI BHAI SOLANKI:**

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान एवं प्रौद्योगिकी मंत्री be pleased to state:

- (a) the details of new green crackers launched by the Government;**
- (b) whether the cracker industry has adopted the new green crackers developed to reduce pollution, if so, the details thereof;**
- (c) whether new green crackers will require substantive change in production technology;**
- (d) if so the details thereof; and**
- (e) the specific steps taken/proposed to be taken to identify green crackers and ensure that non-green crackers are not sold in the guise of green crackers?**

ANSWER

**MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES
(DR. HARSH VARDHAN)**

(a) to (e) : A statement is laid on the Table of the House.

**STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) OF
LOK SABHA STARRED QUESTION NO. *74 FOR 05-02-2021
REGARDING "GREEN CRACKERS".**

- (a) Council of Scientific and Industrial Research through its constituent laboratory namely National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur has developed new formulations for reduced emission light and sound emitting crackers with 30% reduction in particulate matter using Potassium Nitrate (KNO₃) as oxidant.**

Different types of new green crackers have been developed which are as given below:

- **Safe Water Releaser (SWAS): Minimizes use of potassium nitrate and sulfur, which has matching sound intensity with the conventional crackers;**
 - **Safe Minimal Aluminium (SAFAL): Minimal use of Aluminium in crackers; and**
 - **Safe Thermite Crackers (STAR): Minimizes use of Sulphur and Potassium Nitrate.**
- (b) Yes Sir. Nearly 595 fireworks manufacturers are registered with CSIR-NEERI for using new formulations developed by CSIR for production of less polluting firecrackers.**
- (c) No Sir.**
- (d) Does not arise.**
- (e) The specific steps taken to identify green crackers that ensure that non-green crackers are not sold in the guise of green crackers is as under:**
- **The use of QR codes by green cracker manufacturers shall facilitate to identify the authenticity of products;**
 - **A simple QR Code based application that can be deployed on smartphones and other mobile devices which will help the end-user and the manufacturers to scan and identify the genuineness of the product by using a specific android or iOS app;**
 - **Manufacturers can print unique encrypted QR codes on their product package; and**
 - **The app will scan the encrypted QR codes, generated from a separate web application by the manufacturer to check the genuineness of the product.**
