

प्रारंभिक व्यावसायिक परीक्षण रिपोर्ट

संख्या/No. CSIR/CMERI/FMTTC/2024/019

INITIAL COMMERCIAL TEST REPORT

माह/Month: June, 2024

THIS TEST REPORT VALID UP TO

: 31ST MAY, 2031



**AL-BURHAN INTERNATIONAL
BATTERY OPERATED KNAPSACK SPRAYER
(8AH ECONOMY)**



कृषि मशीनरी प्रशिक्षण और परीक्षण केंद्र
Farm Machinery Training and Testing Centre
सीएसआईआर- केन्द्रीय यांत्रिक अभियांत्रिकी अनुसंधान संस्थान
CSIR - Central Mechanical Engineering Research Institute
महात्मा गांधी एवेन्यू, दुर्गापुर
Mahatma Gandhi Avenue, Durgapur
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Name & Address of Applicant : Al Burhan International
16 B. R. B. Basu Road
1st Floor, Kolkata - 700001

Name & Address of Manufacturer : Al Burhan International
16 B. R. B. Basu Road
1st Floor, Kolkata - 700001

Type : Knapsack Sprayer (Battery Operated)

Make : RAJA

Model : 8 AH Economy

Test Conducted at : Farm Machinery Training and Testing Centre
CSIR- Central Mechanical Engineering Research
Institute, M G Avenue, Durgapur, Pin – 713209,
West Bengal.

THIS TEST REPORT IS VALID UP TO: 31st MAY, 2031
[vide DAC&FW OM No. 13-22/2020- M&T (I&P) dated 12.12.2023]



Government Of India



Report No.: CSIR/CMERI/FMTTC/2024/019

Month: June

Year: 2024

**CSIR - Central Mechanical Engineering Research Institute,
Durgapur - 713209
(W.B.), INDIA**

Report prepared by**Report verified by**

CSIR/CMERI/FMTTC/2024/019	AL-BURHAN INTERNATIONAL BATTERY OPERATED KNAPSACK SPRAYER (8AH ECONOMY) (INITIAL COMMERCIAL TEST)
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Manufacturer : Al Burhan International
 16 B R B Basu Road
 1st Floor, Kolkata - 700001
 Test requested by : Applicant
 Selected for test by : CSIR-CMERI
 Method of selection :

The test sample was randomly selected by Video call. The applicant arranged 10 samples of RAJA 8AH Economy Battery Operated Knapsack Sprayer with same specifications. The sprayers with following serial number were considered for random selection.

Sample No.	Sprayer Serial No.
1	001
2	002
3	003
4	004
5	005
6	006
7	007
8	008
9	009
10	010 (Selected for Test)

Table 1. Samples for Random Selection

1. SPECIFICATIONS

1.1 General

Type : Battery Sprayer
 Make : RAJA
 Model : 8 AH Economy
 Serial No. :
 Name of manufacturer : Al Burhan International
 16 B R B Basu Road
 1st Floor, Kolkata - 700001
 Year of manufacture : 2024
 Capacity of sprayer, l : 16
 Working pressure, kg/cm² : 1 to 6

1.2 Motor (As per Sticker)

Type : D C Motor
 No. of Motor : 01
 Make : RAJA
 Serial number : C23/09D
 Motor operating voltage : 12 V, DC
 Motor power : 48 Watt
 Max. Current : 4 A
 Rated speed, rpm : 3100

Report verified by
Sudhanta Kr Mandal

Report prepared by
Johel

16. CONFORMITY TO INDIAN STANDARDS

- | | |
|--|----------------------------|
| i) IS 11313:2007* Hydraulic power sprayers- specification | : Does not conform in toto |
| ii) IS 10134:1994* Method of test for manually operated sprayer | : Does not conform in toto |
| iii) Spray nozzle and spray gun as per IS:3652-1995* (Reaffirmed 2011) | : Does not conform in toto |
| iv) IS: 3906:1995* (Reaffirmed 2001) Crop protection equipment – Hand-operated Knapsack Sprayer, Piston type - specification | : Does not conform in toto |
| v) IS: 2643-2005* Pipe threads where pressure-tight joints are not made on the threads-dimensions, tolerance and designation | : Does not conform in toto |

**This is battery operated Knapsack Sprayer and the above mentioned standards are not the correct standard for the certain test.*

Report prepared by



Report verified by



17. COMMENTS & RECOMMENDATIONS


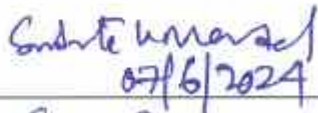
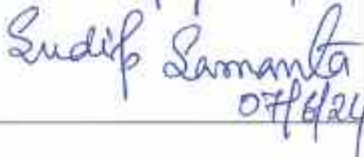
- 17.1 The model, serial number & country of origin of pump is not specified. It should be specified.
- 17.2 The material used for pump inlet port end fitting does not meet the requirements of Indian standard. It must be looked into.
- 17.3 The spray lance is not marked and designated. It must be marked and designated as per standard.
- 17.4 The length of the telescopic lance from sealing face to sealing face does not meet the requirement of Indian standard. It must be looked into.
- 17.5 The material used for end fittings of the spray lance does not meet the requirements of Indian standard. It must be looked into.
- 17.6 The nozzle is not marked and designated. It should be marked and designated as per standard.
- 17.7 The cut off device is not marked and designated. It should be marked and designated as Per standard.
- 17.8 During the pump chamber hydraulic test, the motor stopped beyond 6.0 kg/cm² pressure against the pressure requirement of 7.5 kg/cm². Thus the sprayer does not meet the requirement of Indian Standard.
- 17.9 The length of the nipple of discharge outlet of the pump does not meet the requirement of Indian standard. It must be looked into.
- 17.10 The size of the strap cushion does not meet the requirements of Indian standard. It must be looked into.
- 17.11 The average size of apertures of the strainer in cut off device does not meet the requirements of Indian standard. It must be looked into.
- 17.12 Time required to full charge the battery with AC charger is observed as 6 hrs. to 6 hrs. 10 mins.
- 17.13 The spraying operation time after fully charging the battery was observed as 4 hrs. 10 min. to 4 hrs. 25 min.

Report prepared by**Report verified by**

18. TECHNICAL LITERATURE

The operator, maintenance & parts manual of sprayer was not provided, it must be provided conforming to as per IS: 8132:1999.

TESTING AUTHORITY

Report Prepared by	Sr. Technical Officer, CSIR-CMERI Farm Machinery Testing Centre	 07/06/2024
Report Verified & Approved by	In-Charge, CSIR-CMERI Farm Machinery Testing Centre	 07/6/2024
Report Approved for release by	Head, Business Development Unit, CSIR-CMERI, Durgapur	 07/6/24

19. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
19	17.1 to 17.13	As early as possible we will compile all the required parameters.

