# **Comparative Test**



# Utensil-Cleaning Bars Which one does the dishes best?

All one may be concerned about is the cleaning efficacy of the product but clearly there's more to it than just that. Cleaning is what your regular utensil bar does or is expected to do. That being the basic requirement, what may be the differentiating factor that makes one brand of cleaning bar preferable to another? The one that does least or no damage to your dishes through the constant washing, while also being capable of removing the toughest stains and grease? Or the one that gets less soggy? What factors determine these attributes in the utensil bar? Read on to find out which brands' claims to superiority and differentiation held out in the tests that we put them through, as per parameters defined by the national standard.

## A Consumer Voice Report

e evaluated the 10 brands as per their overall performance based on the comprehensive lab-test reports. The tests covered a range of quality, performance and acceptability parameters. These included cleaning efficacy, tough-soil cleaning, active matter, surface damage, lather, mushiness, moisture, active alkalinity, retention on 250-micron sieve, and matter insoluble in alcohol. The performance tests were conducted using stainless-steel plates as per guidelines of Indian Standard. It may be noted that Exo and Pitambari claimed to be anti-bacterial.

The samples were tested as per requirements specified in IS: 6047: 2009 (reaffirmed in 2016). The tests were conducted at an NABL-accredited laboratory.



# **Utensil-Cleaning Bars**

Rank	Total Score out of 100 (rounded off)	Brand	Variant	Net Weight (gm)	Retail Price (Rs)	Cost per 100 gm (Rs)	Manufactured/ Marketed by
1	93	Clean Mate	New Improved	600 (200 x 3)	48	8	Future Consumer Enterprises Ltd
2	92	Xpert	Super-saver pack	560 (140 x 4)	30 (buy 3, get 1 free)	5.36	RSPL Ltd
3	89	Vim		600 (200 x 3)	40	6.67	Hindustan Unilever Ltd
4	88	Nip	Nature & Shakti	750 (250 x 3)	46	6.13	Fena (P) Ltd
5	87	Pril		600 (200 x 3)	47	7.83	Jyothy Laboratories Ltd
6	86	Odopic	With Lime Power	900 (300 x 3)	61	6.78	Dabur India Ltd
6	86	Pitambari		600 (200 x 3)	45	7.50	Pitambari Products Pvt. Ltd
7	83	Reliance	Scrubz Lemon Power	800 (200 x 4)	48 (buy 3, get 1 free)	6	Reliance Retail Ltd
8	82	Exo	Anti-Bacterial Touch & Shine	1,200 (300 x 4)	72	6	Jyothy Laboratories Ltd
9	73	Patanjali	Super Dish Bar	280	15	5.36	Patanjali Ayurved Ltd

## **BRANDS TESTED**

Score Rating: >90: very good\*\*\*\*\*, 71–90: good\*\*\*\*, 51–70: average\*\*\*, 31–50: poor\*\*, up to 30: very poor\*





#### **Key Findings**

- Based on the overall score, the top performer is Clean Mate and is followed by Xpert.
- The value-for-money brand is Xpert.
- In performance tests (cleaning efficacy and tough-soil cleaning), Xpert and Clean Mate were top scorers.
- Xpert and Clean Mate had highest quantity of active matter.
- Clean Mate and Pitambari generated the highest foam height (lather).
- Patanjali, Xpert and Pitambari had insoluble matter above the maximum limit of 80 per cent. Clean Mate had the least percentage of insoluble matter.
- Mushiness was found lowest in Vim and highest in Reliance.
- Net weight of Exo was found to be less, exceeding the specified tolerance limit.

Utensil-cleaning products are formulations in powder, bar, paste or liquid form, containing a cleansing agent like synthetic detergent, soap, SLS, etc., along with powdered, mildly abrasive materials (optional in case of liquid). These are used primarily for cleaning of utensils and crockery, and secondarily for kitchen shelf and basin or even cooker tops, etc., where cleansing is effected by the combined action of detergency and scrubbing.

Liquid utensil washers are liquid-based soaps which have gained in popularity due to their being more convenient to use as well as ability to reduce surface damage. Liquid soaps also cause less wastage in comparison to bars as they do not have mushiness property.



# **Utensil-Cleaning Bars**



# TEST RESULTS FOR PHYSICOCHEMICAL PARAMETERS

Cleaning efficacy | Active matter | Tough-soil cleaning | Surface damage | Lather | Moisture | Active alkalinity | Mushiness | Retention on sieve | Matter insoluble in alcohol

#### Cleaning efficacy

Cleaning efficacy is the efficiency of the bar to clean the utensil with a fixed amount of utensil bar. A fixed quantity of bar (5 gm) was taken for each brand to check the cleaning efficacy. A minimum of five plates needed to be cleaned per 5 gm of sample. The test evaluated the efficiency of the product in removing grease and oil.

- All the brands cleaned more than the minimum number of plates (5).
- Clean Mate and Xpert each cleaned the maximum number of plates (10).

#### Active matter

Active matter refers to cleansing agents/ compounds and is the key ingredient of utensil bars.

It was highest in Xpert (16.77 per cent) and Clean Mate (16.71 per cent), and lowest in Patanjali (12.15 per cent).

#### Tough-soil cleaning

be a minimum 8.0 per cent.

To evaluate the tough-soil cleaning efficiency, a soiling mixture consisting of wheat flour (16.5 per cent), besan flour (16.5 per cent), rice flour (17 per cent) and vegetable oil (50 per cent) was prepared and spread evenly on a stainless-steel plate using a brush. The soiled plate was put on a hot plate maintained at a temperature of 325 degrees C for about two minutes, and was subsequently cooled at room temperature. The plate was then cleaned thoroughly with the utensil bar. The national standard requires a minimum 20 per cent to be cleaned.

As per the standard, active matter in utensil bar shall

 Active matter in all the brands was found to be above the minimum requirement of 8.0 per cent.

• All the brands were able to clean the tough soil adequately, thus meeting the IS requirement. Xpert (97.25 per cent) and Clean Mate (96.80 per cent) scored highest and Patanjali (88.09 per cent) lowest.

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#### Surface damage (scratches)

Stainless-steel plates were soiled by applying two grams of oil and then cleaned using the bars being tested. Scratches on plates were examined by visual inspection. As per the national standard, a maximum of two scratches are acceptable.

• All brands cleared the test.

#### Lather

Foam/lather generated is the amount of foam generated after dissolving a fixed quantity of powdered

utensil bar in a specified quantity of water. This test indicates the foaming efficiency of the product. Lather shall be a minimum 70 ml.

- All brands passed the test.
- Clean Mate and Pitambari (both 122 ml) generated the highest amount of foam, followed by Xpert and Reliance Scrubz (both 120 ml).
- Moisture and volatile matter content at 105 degrees C

Moisture is the amount of water present in the bar. The limit according to the national standard is a maximum 10 per cent by weight. The presence of high moisture can lead to the product turning lumpy.

• All the brands were found well below the maximum limit.

#### • Active (reserve) alkalinity

The maximum limit for active alkalinity as per the Indian Standard is 20 ml. All the brands were rated between the balanced levels of alkalinity keeping in mind its effect on the skin of users.

- All brands were well below the maximum permissible limit, making them safe for human skin.
- Pril with 1.25 ml had the lowest alkalinity among all the tested brands; Xpert with 3.90 ml had the highest.

Parameter V	Weightage (%)	Clean Mate	Xpert	Vim	
Cleaning efficacy (no. of plates cleaning per 5 gm)	25	25.00	25.00	21.00	
Active matter, % by wt	15	14.23	14.26	13.03	
Tough-soil cleaning, %	10	9.84	9.86	9.62	
Surface damage	10	10	10	10.0	
Lather (0.25% solution after 1 minute)	8	7.81	7.68	7.17	
Moisture, % by wt	5	4.46	4.41	4.19	
Active alkalinity, ml	5	4.35	4.28	4.42	
Mushiness (loss in mass due to mushing), g/50cm2	5	3.45	3.34	4.45	
Retention on 250-micron IS sieve, % by wt	5	3.26	4.26	4.70	
Matter insoluble in alcohol, % by wt	5	3.94	2.75	3.65	

#### PHYSICOCHEMICAL

# **Utensil-Cleaning Bars**

#### Mushiness

Mushiness is the property of a bar to absorb water and also get dissolved in it. The amount of mushy part was measured and reported.

 Reliance Scrubz and Nip were found to have the highest mushiness – these bars showed the highest weight of soggy part. Vim showed the lowest mushiness.

#### Retention (on a 250-micron sieve)

The composition of the utensil bar should be such that all its ingredients are soluble in water. The maximum limit of retention is 0.1 per cent.

• All brands except Patanjali had retention well below the maximum limit.





#### • Matter insoluble in alcohol

Insoluble materials are a part of the utensil bar's composition. These indicate the quantity of filler material in the bar's composition and shall be a maximum 80 per cent.

- Most of the brands were found to be just meeting the IS requirement in this test. Three brands – Patanjali, Pitambari and Xpert – exceeded the maximum permissible level of 80 per cent.
- Clean Mate (77.04 per cent) had the least percentage of insoluble matter and therefore scored highest on this parameter.

Nip	Pril	Odopic	Pitambari	Reliance Scrubz	Exo	Patanjali
23.00	21.00	21.00	19.00	19.00	19.00	14.50
13.26	13.09	13.09	13.03	12.04	12.39	11.49
9.68	9.57	8.57	9.61	9.53	9.69	9.40
10	10	10	10	10	10	8.0
7.42	4.61	7.55	7.81	7.68	4.99	7.04
3.94	4.52	4.37	4.61	3.79	4.55	4.18
4.41	4.94	4.89	4.70	4.32	4.59	4.50
2.91	3.66	3.30	3.82	2.78	3.46	3.05
3.46	4.72	3.50	4.34	4.38	3.38	1.50
3.50	3.73	3.90	2.75	3.46	4.48	2.75

#### **SCORES**

# **Comparative Test**

#### **GENERAL QUALITIES**

#### Marking

Each packet shall contain the following information:

- a) Name of material and type
- b) Weight of the material in the package (when packed)
- c) Name of manufacturer and trademark, if any
- d) Batch number
- e) Month and year of manufacture
- f) Directions and instructions for usage
- g) MRP
- h) Customer-care details
  - None of the tested brands provided directions and instructions for usage although the national standard requires the same on the packet.
  - Batch number was not marked in Nip, Reliance Scrubz and Xpert.

#### Packaging

The utensil bar should be securely packed in plastic wrappers, paperboard containers, or cartons as appropriate to the product form, or adequately sealed to retain the essential moisture contained in the utensil bar. Ideally, packaging should also be recyclable or biodegradable.

• All the brands had moisture-proof flexible packaging.

#### Net Weight

The net weight for all the brands was measured and compared with the respective declared values. The maximum permissible error, as per Legal Metrology Rules, is 9 gm for products weighing between 200 gm and 300 gm; for products weighing between 300 gm and 500 gm, the maximum permissible error is 12 gm.

- The net weight of Clean Mate, Vim, Pril and Reliance Scrubz was as per their claim.
- Net weight of Patanjali, Nip, Odopic, Xpert and Pitambari was found to be less than their claim but was within the specified tolerance limit.
- Net weight of Exo was found to be less than the tolerance limit.

