



## Dishwash Liquid/Gel

### These brands are the best

Keeping dishes and utensils clean is an important part of practicing good kitchen hygiene and food safety for everyone. While choosing your dishwash liquid/gel, it's important to make sure that the dishwash soap/liquid meets all surfaces of the dish to properly clean it. You can either create a sudsy solution in the sink or your largest dish or apply directly to the dish or sponge and scrub each one individually ensuring you get all sides, and inside hard-to-reach items. However, choosing the best brand to clean utensil forms the most important task in hand given the fact that there are plenty to choose from. Therefore, we handpicked seven dishwash liquid/gel brands and tested these products following the Indian Standard IS: 6047:2009 specification for Scouring Products (liquid type) for Utensil Cleaning. Read on to know which brand grabbed the top positions based on their performance scores.

*A Consumer VOICE Report*

## Comparative Test

All the brands were evaluated and graded as per their overall performance based on the comprehensive lab-test reports. The products were tested on parameters including cleaning efficacy,

tough soil cleaning, active matter, lather, surface damage, sensory tests, active alkalinity, packing, marking, net volume among others.

### Brands Tested

The following table is a ready reference to check the number one dishwasher liquid/gel.

Rank	Total Score out of 100 (rounded off)	Brands	Variant	Claim	Net volume, ml	Retail Price. Rs.	Cost per 100 gm in Rs.	Best Before, Months	Manufacturer/ marketer
1	97	Clean Mate	Lemon power	Utensil Gel	250	43	17.20	24	Future Consumer Enterprises Ltd
1	97	Reliance Scrubz	Extra Strong	Concentrated (Refill pack)	500	125 (Buy 1 get 1 free)	25.00	Not marked	Reliance Retail Ltd.,
2	96	Dettol	Lime splash	Disinfectant Kills 99.9% germs	200	72	36.00	24	Reckitt Benckiser India Pvt Ltd
3	94	Vim	With Power of Lemon	Concentrated Gel	250	65	26.00	Not marked	Hindustan Unilever Ltd.,
3	94	Giffy	Lemon & Active salt	Concentrated GEL	250	45 (free santoor soap 75 gm)	18.00	24	Wipro Enterprise Pvt Ltd
4	93	Pitambari	Lemon	Concentrated Antibacterial	150	32	21.33	Not marked	Pitambari Products Pvt. Ltd.,
5	92	Pril	Lime	Concentrate	425	98	23.05	24	Jyothy Laboratories Ltd.,

The above seven brands were evaluated and graded as per their overall performance based on the comprehensive lab-test reports. It is here to be noted that, brands Dettol and Pitambari claimed to be anti-bacterial.

### Key findings

- Brands Clean Mate and Reliance Scrubz secured number 1 position followed by Dettol in overall performance score.
- In performance tests that includes cleaning

efficacy and tough soil cleaning parameters, Clean Mate and Reliance Scrubz performed exceedingly well.

- Brand Clean Mate was recognized as The Value-For-Money product too.
- However, brands Clean Mate and Reliance Scrubz were found with the highest quantity of Active Matter.
- Vim followed by Dettol and Reliance Scrubz were found with the highest lather content.
- All the tested brands were found free from any harmful skin effect.

**CV RECOMMENDATIONS**



**COMPARATIVE PERFORMANCE SCORES OF DISHWASH LIQUID/GEL**

Test Parameters	Brand	% Weight-age	Clean Mate	Reliance Scrubz	Dettol	Vim	Giffy	Pitambari	Pril
<b>1. General Tests</b>									
Packing		3	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Net Volume		3	3	3	3	3	3	3	3
Marking/Labeling		4	3.9	3.6	4.0	3.1	3.9	3.6	3.6
<b>2. Physico-Chemical Tests</b>									
Active Matter		15	14.04	13.87	12.74	11.79	12.95	12.01	11.71
Active alkalinity		5	4.7	4.4	4.7	5.0	4.7	4.7	5.0
Lather		10	8.9	9.5	9.7	10.0	7.5	8.4	7.8
Cleaning Efficacy		25	25	25	24.25	23.50	24.25	23.50	23.50
Tough soil Cleaning		15	15	15	15	15	15	15	15
Surface Damage		10	10	10	10	10	10	10	10
Sensory Tests (Fragrance, Skin effect, colour)		10	10	10	10	10	10	10	10
Total Score		100	97.04	96.87	95.89	93.89	93.80	92.71	92.11
Total Score, % (Rounded off)		100	97	97	96	94	94	93	92

Rating: >91 - Very good \*\*\*\*\*, 71-90- Good \*\*\*\*, 51-70 Average \*\*\*, 31-50- Poor \*\*, up to 30 - Very Poor \*



### TEST RESULTS

Cleaning Efficacy| Tough Soil Cleaning| Active Matter| Lather| Surface Damage| Sensory Tests| Active Alkalinity| Marking| Net Volume| Packing

### TEST PARAMETERS

Test parameters for comparative testing were decided following the relevant Indian standard IS:6047-2009, which was reaffirmed in 2016.

### Cleaning efficacy

Cleaning efficacy is the cleaning capability of the dishwash liquid for utensils. A fixed quantity of liquid, in this case 5 gm of liquid/gel was taken from each brand to check the cleaning efficacy. This test was done to evaluate the grease/oil removal efficiency of the product. As per the evaluation protocol, each 5 gm of sample should be able to clean minimum 5 plates. Here, in this test, all the brands could clean more than the minimum number of 5 plates while brands Reliance Scrubz and Clean Mate each had cleaned the maximum number of 20 plates, hence scored 10 out of 10.

### Tough soil cleaning

To evaluate the tough soil cleaning efficiency test, a soiling mixture consisting of wheat flour 16.5 per cent, *besan* flour of 16.5 per cent, rice flour 17 per cent and 50 per cent vegetable oil was prepared and spread evenly on the stainless steel plate using a brush. Soiled plates were put on hot plate maintained at temp. Of 325°C for about 2 minutes and was cooled at room temperature. Then using the under-test products (liquid dishwash/gel), the plates were cleaned Thethoroughly. The soil solution was is spread evenly on the stainless steelstainless-steel plate using a brush such that the soil loading could be at is 0.2 g/cm<sup>2</sup>• The minimum tTough soil cleaning capacity should be at 5 per cent. All the brands were able to clean the tough soil adequately meeting the Indian Standard (IS) requirements. The brands performed well above the minimum requirement as well.

### Active matter

Active matter is the major key ingredients as amount of cleansing agent/compound present in

the cleaning liquid in the form of detergent or soap for the cleaning purpose. Active matter shall be minimum 12.0 per cent. All the brands were found above the minimum requirement of 12 per cent. Brand Clean Mate (21.41) followed by Reliance Scrubz (21.12) were found with highest amount of active matter while other brands had met the minimum requirement of 12 per cent.



### Lather

Foam/lather is the amount of foam generated after dissolving a fixed quantity of powered utensil bar in a specified quantity of water. This test indicates the foaming efficiency of the product. Lather shall be 70 ml minimum. All the brands passed the test. However, brands Vim and Dettol and followed by Reliance Scrubz generated the highest amount of foam.

### Surface damage (scratches)

The stainless-steel plates were soiled by applying 2 gms of oil and then cleaned using the under-test products. Scratches on plates were examined by visual inspection. As per the national standard, maximum of 1 scratch is acceptable. All the brands passed this test.

### Sensory/effect on skin

Sensory tests were conducted in lab for parameters including fragrance, colour and effect on skin. All the brands had lemon/lime fragrance. Colour was green or yellow. No effect was observed on skin from any brand tested. Thus, they were found safe for use.

**Active (reserve) alkalinity:** The maximum limit for active alkalinity as per the Indian Standard (IS) 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 the brands were well below the maximum permissible limit thus found

safe to human skin. Brand Vim and Pril had the lowest active alkalinity at 0.10ml.

### Marking

1. According to the prescribed standards, such product packages shall be marked with the following information:
2. Name of the material and type.
3. Volume of the material in the package 'When packed'.
4. Name of the manufacturer and trademark, if any.
5. Batch number.
6. Date of manufacture (month and year).
7. Directions and instructions for usages.
8. Precautions.
9. Best before.
10. Key ingredients in descending order.
11. MRP.
12. Customer care details.

It was observed that best before was not mentioned by Reliance Scrubz, Vim, Pitambari. Vim did not mark instruction for use. Whereas brand Dettol had all information recommended by the Indian standard requirements.

**Net volume:** The net volume for all the brands was measured and compared with the declared value.

Net volume of all the brands was found as per their claim. Dishwash liquid/gel comes in concentrated gel/liquid form. Therefore, it should be diluted before use as per the instruction given on pack.

### Packing

The materials shall be securely packed in plastics, wrappers, paper board containers, cartons as appropriate to the product. Packaging should be

recyclable or biodegradable. All the brands except Pitambari were packed in plastic bottle. Pitambari was packed in plastic pouch packaging. Pouch packs are cheaper than plastic bottle pack

### BETTER TO KNOW

#### About dishwashing liquid/gel

Dishes and utensils cleaning products are the formulations in powder, bar, paste or liquid form, which contain a cleansing agent like synthetic detergent, soap, SLS etc. along with a powdered mildly abrasive materials (optional in case of liquid). These are used for cleansing of utensils, crockery, and kitchen shelf and at times for wash basin, cooker tops etc. where cleansing is affected by the combined action of detergency and scrubbing.

Two types of dish cleaner are mainly used for dish washing:

**Dishwash Bars:** Bars which are commonly used for the purpose of cleaning the utensils.

**Dishwash Liquid Washer:** Liquid utensil washers are the liquid-based soaps which are more convenient to use as well as gives a good washing and reduces surface damage. Liquid soaps are more expensive and cause less wastage in comparison to bars as they do not have mushiness content.

#### Should you use a dishwasher?

Dishwasher can help save your time, water and energy. It is more water and energy-efficient than washing dishes manually— since a running sink uses more water, and the dishwasher uses less water in an entire cycle. Dishwashers are designed to clean at high temperatures, and yours might include a sanitization cycle. If you are busy or have a large household, a dishwasher will save you the time and effort of having to wash your dishes manually. Dishwashers can also clean more efficiently and are more hygienically. Water in dishwashers is heated to high temperatures to help kill any lingering bacteria, leaving your cutlery, dishes and glasses hygienically clean and ready to use again.



### Conclusion

Based on the overall performance of the utensil liquids tested in the laboratory, a few brands have performed slightly higher than the others possibly due to higher quality of ingredients used in their compositions. The performance tests were conducted using the recommended stainless steel fresh/new plates as per guidelines of Indian standard. For tough soil cleaning test, the stainless-steel plates were kept in the oven for a specific time and performance of all the brands was found satisfactory. Thus, keeping into the overall test performance, brands Clean Mate and Reliance Scrubz attained the number 1 position followed by Dettol. On the other hand, we also found Clean Mate as the Value-For-Money brand in our test.