

Primary report: Superfry Frying Trial- Kadai

**Objective:**

We have conducted an application test to understand relative performance of oil absorption of Superfry in comparison to common Indian retail cooking oil Sunflower, Soybean and Palm Oil for highest consuming frying products at home.

**Top Line Conclusion:**

Superfry has performed overall 13% better in terms of oil absorption compare to other oils used for the same products under trial.

Table A: Superfry - Formulation

**Frying application test and procedure:**

Table B gives details of food that were fried and the quality observation parameters monitored. The frying procedure and food preparation recipe is mentioned in Annexure 1.

Table B:

	Product Code	Fry with food	Observation & Monitoring
1	Superfry ROBE-1304	Poori	Quantitative test: 1. Oil absorption in Food 2. FFA % 3. TPM %  Qualitative test: 1. Colour of fried food 2. Smoking from oil. 3. Foaming 4. Oil absorption in food
2	Palm oil Batch No: (AO) FY 24 E04	Bhajia	
3	Soybean oil Batch No: (AO) SB 15 E 07 C	Samosa	
4	Sunflower Oil Batch No: (AO) SF 15 E 04A	All are highest consuming deep fried product at Indian homes.	

**Results and discussion:**

Table C: Oil Absorption on 'As is Basis' and at 100 baseline of Frying tonite

	Name of the oil Sample	POORI-A		BHAJIA- B			SAMOSA -C			
		Actual absorption As is basis in %	Oil absorption of other oil over Frying Tonite with 100 % base	Actual absorption As is basis in %	Oil absorption As is basis in %	Oil absorption of other oil over Frying Tonite with 100 % base	Actual absorption As is basis in %	Oil absorption As is basis in %	Oil absorption of other oil over Frying Tonite with 100 % base	
1	Soyabean Oil	10.29	105.21	9.85		107.40		8.58		99.51
2	Palm Oil	12.57	128.48	12.41		107.85		8.61		125.37
3	Superfry	9.78	100.00	9.9		100.00		7.98		100.00
4	Sunflower Oil	10.87	111.16	10.32		111.03		8.87		104.21

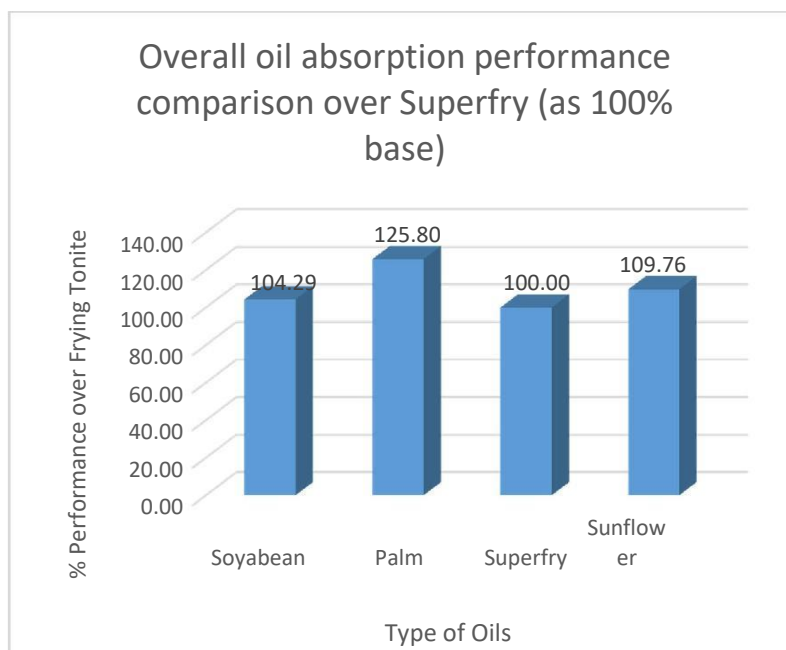
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A sample size of 100 Indian housewives via telephonic interview regarding the frequency of frying they do in their homes. The highest frequency nearly 70% of oil in cooking is consumed at home by Poori/ Paratha, over 20% used in Bhajia/Vada or similar products and balance 10% in products like Samosa/Papad or other snacks. Hence we have calculated the overall oil absorption performance by the fried foods of other oils over Superfry (Chart A) in above proportion (7:2:1).

Chart: A



Remarks on absorption:

1. POORI and SAMOSA rounds: Superfry exhibited lowest oil absorption and second lowest in BHAJIA round (Table C).
2. Overall, Superfry showed 4.29%, 25.8% and 9.76% less absorption than Soybean Oil, Palm Oil and Sunflower oil respectively.
3. Assuming 25% usage of each type of oil under comparison, then Superfry is overall 13% better in terms of oil absorption.




Food and Oil characteristics:

Palm Oil exhibited smoking throughout the frying exercise irrespective of food type compare to other oil and was followed by Soybean oil.

The foods fried in Superfry and Sunflower oil were lighter in colour.

Annexure 1:

FRYING PROCEDURE AND FOOD RECIPE

POORI	<p>We have fried 15 Pooris' in each frying cycle weighing Around 20 -21 gm each. Frying temperature was 205-220° C Frying duration for each Poori was 20-25 seconds Each frying cycle was for 10 minutes. TPM was measured and recorded after each fry. Sample collected for three Pooris' from each frying cycle (1<sup>st</sup>, 7<sup>th</sup>, 15<sup>th</sup>)</p>	
SAMOSA	<p>We have fried 4 samosas in each frying cycle weighing around 60-63 gm each. Frying temperature was 120 °C at starting and up to 160 °C till finish. Frying duration of one cycle was 20-22 minutes. TPM was measured and recorded after every fry.</p>	
BHAJIA	<p>We have fried 300 gm of batter in each frying cycle. Frying temperature was 155-160 °C Frying duration was 7-8 minutes. TPM was measured after 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> fry.</p>	

Typical recipe of Food :

Poori		
Ingredients	Amount	Per 100 G
Flour	7.2 kg	60.217
Salt	16.8 g	0.141
Oil	240 g	2.007
Water	4.5 kg	37.635

Samosa:		
Ingredients	Amount (g)	Per 100 g
Potatoes	3000	81.12
Oil	250	6.76
Whole Coriander Seeds	38.92	1.05
Fennel Seeds	8.95	0.24
Cumin Seeds	17.84	0.48
Salt	40.43	1.09
Turmeric	Pinch	
Chilli Powder	29	0.78

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Red Chillies	11.76	0.32
Garam Masala	8.49	0.23
Crushed Ginger	104.58	2.83
Dry Mango Powder	33.75	0.91
Green Peas	154.55	4.18
Total	3698.27	100.00
Water Through Potato	30	3
For Outer Covering Dough		
Ingredients	Amount (g)	Per 100 g
Flour	1000	61.54
Ghee	200	12.31
Ajwain	10	0.62
Salt	15	0.92
Water	400	24.62
Total	1625	100.00

Bhajia		
Ingredients	Amount (g)	Per 100 g
Onion (Peeled & Sliced)	150	49.19
Potatoes (Peeled & Sliced)	80	26.23
Chickpea Flour (Besan)	50	16.40
Corn Flour	7.5	2.46
Chilli (Chopped)	8	2.62
Carom Seeds (Ajwain)	1.55	0.51
Salt	4	1.31
Red Chilli Powder	3	0.98
Bicarbonate Soda	0.9	0.30
Total	304.95	100.00
Water through Potato	63.2	20.72
Water through Onion	134.06	43.96