

"SENSORY EVALUATION OF FRAGRANCES"

A DEMONSTRATION

By

Sitaram Dixit

Sitaram Dixit and G. S. Ranade jointly gave a demonstration titled "**Sensory Evaluation of Fragrances**". Sitaram Dixit commenced the presentation, comprising of four parts, Introduction, Demonstration, Analysis, and Conclusion.

INTRODUCTION

Introducing fragrances to the audience, Sitaram explained how, The use of fragrance that was an item of luxury and refinement is as old as the human race. As the world became increasingly civilised, fragrances were used as offerings to please the Gods gradually replacing animal sacrifices. Fragrances originated in India in early times and regular barter trade by the Arabs carried it to the western shores, like Egypt, Persia, Greece, and Rome where it further flourished.

Briefly explaining the history Sitaram revealed that in the Vedas, that are more than 3000 years old, there is a mention of natural fragrances used for cosmetic purposes during religious ceremonies. There were references in our Epics the Ramayana and Mahabaratha in knowledgeable detail. However the aesthetic aspect of fragrances slowly diminished and fragrance became necessities, increasing our use and dependence in our day to day life.

The synthesis and production of an increasingly large number of synthetic perfumery chemicals during the early 20th century introduced newer fragrance substances giving entirely new odour effect marking the beginning of Modern Perfumery Industry. The technological development seen in the past century has changed fragrance Creation from a pure work of art to a combination of art and chemical science.

Mass production has increased the consumption of fragrance enormously and fragrances are present throughout all levels of product right from an expensive product to the cheapest. Sitaram said that the fragrance used in a product form may range from 0.5 to 2.0 % but its performance and signal attributes claim a very high percentage almost upto 70 to 80% showing the importance of this sensory perception.

People have five senses, using which one enjoys life on earth.

VISION - EYES

SOUND - EARS

TOUCH - FEEL

TASTE - TONGUE
SMELL - NOSE

Of the five sensory perceptions, fragrance communication is the most complicated one with a very high degree of subjectivity. In spite of high subjectivity an average healthy nose, can detect about 4000 different odours, while sensitive trained noses can smell more than 10,000 odours in a lifetime. Thanks to the six to ten million receptor cells present in the olfactory membrane of the human nose, directly linked to the brain.

Sitaram explained how consumer needs are very complex. Food, clothing and shelter are necessities that are indispensable for survival. Soaps, Detergents, Personal and Household Care products, represent a strong emotional need. Fragrance in functional products takes care of this emotional need, stimulating as well as calming or relaxing the user.

Sitaram quoted Prophet Mohamed, who had said, "*Perfume is the nourishment that stimulates my thinking*" and remarked that their endeavour in this session was to stimulate the audience to think by getting them to select, prefer and like the fragrance in the end product - as a facet of Quality Control. This would be carried out in case of consumer products like Soaps, Shampoos, Talcum's, and Detergents, by using sensory methods for getting market responses.

DEMONSTRATION

The demonstration started with four Case Studies of Fragrance evaluation of products using prototype consumer panels.

The methodology used consisted of a panel of five people formed. One of them was to co-ordinate the panel as panel leader. Four such panels for demonstration purposes were used. All others present were observers.

Case 1: Toilet Soap

Three soaps "A" "B" and "C" were given. Of these, two had identical fragrance and one had a different fragrance. The panellists were asked to find the odd one out by smell only.

Case 2: Talc

Four talc samples "M" "N" "O" & "P" were given. Out of these two, each had identical fragrances. The panel was asked to group them based on odour only.

Case 3: Detergent powder

Three detergent powder samples "R" "S" and "T" were given. The order of odour preference was asked.

Case 4: Shampoo

Three shampoo samples “ X” “Y” and “Z” suitably coloured were given.

1. One had herbal ingredient
2. One had beauty ingredient
3. One had an antibacterial ingredient.

The panel was asked find out which one is which.

All the panels were asked to give their opinions and comments on the samples and were asked to submit their results in 5 minutes after deliberation among panel members for analysis. The correct method of smelling the samples for evaluation was demonstrated by Mr. G. S. Ranade.

RESULTS & CONCLUSIONS

The results obtained from the panels were analysed by Mr. G. S. Ranade and conclusions drawn

On analysis it was found that in two **cases 1: toilet soap and 2: Talc** the results were in line with the actual samples given.

However in Case 3: Detergent powder, the panels opinion differed to the correct answer $R = S > T$ or $T > R = S$. (Sample “ R” & “S” which were cost effective versions of sample “T”)

The panel results showed that the panellist were unable to identify cost effective version of the same fragrance proving that similar profiles of fragrance could be created by perfumers using chemicals with lower and higher costs.

Case 4: Shampoo proved to be a revelation for the audience.

The panellist answered that

Sample X (green) was herbal.

Sample Y (pink) was cosmetic beauty shampoo and

Z (brownish) was anti microbial.

Sitaram concluded the demonstration by informing the house that all the samples were exactly similar and had the same fragrance. This aptly proved how there is a great influence of colour and claims made on the fragrance preference and identity.

The demonstration, thus presented a glimpse of fragrance evaluation, market research, consumer feed back, etc, followed in our industry. The presentation was very much appreciated as an interesting learning experience for all present.