

**“To find out the preference of dosage form of Natural
surfactant” (ALVEOFACT)**

DISSERTATION REPORT

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“Market Assessment of Natural surfactant”(ALVEOFACT)

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1.1 BACKGROUND

Surfactant is a compound of phospholipids, neutral lipids, and certain proteins that are depleted due to the amphipathic nature.

Conflict -Surface,

-Strengthens small alveoli,

-Improves total inflation,

-Reduces hydrostatic driving pulmonary edema and reduces respiratory function.

Amazing cover inside the inner lining of the alveoli. This garment makes it easier for the alveoli to expand during respiration. It also keeps the alveoli from collapsing and sticking together when air leaves the lungs.

Surfactant reduces local contact friction at the air end, thus preventing alveolar collapse. It maintains gas exchange and reduces respiratory function.

Natural surfactants have been shown to be superior to synthetic synthetics in the treatment of neonatal respiratory stress syndrome (RDS

Respiratory stress syndrome (RDS) is more common in newborns. The production of surfactant is insufficient in premature infants which leads to reduced lung compaction, increased soil solidity; and an increased risk of alveolar collapse. Alternative and supportive treatment of respiratory cornmeal in RDS treatment.

1.2 LITERATURE REVIEW

- ➔ Natural surfactants have been shown to be superior to synthetic surfactant in the treatment of neonatal respiratory stress syndrome (RDS). The Alveofact and Curosurfs are the most widely used pharmaceutical preparations for surfactants.
- ➔ Replacement Surfactant replacement is the most common and widely used method of treating respiratory disease (RDS) among newborns. Insufficient production of surfactants by preterm neonates leads to reduced lung expansion and increased alveolar collapse and both of these increase the risk of alveolar collapse. There are two main types of surfactants: natural and artificial. Numerous randomized controlled trials and meta-analyses have reported surfactant benefits in improving survival rates. These studies also confirmed that natural surfactants work better than protein-free surfactants. With so many animal surfactants available, Alveofact, Curosurf and Survanta are the three most widely manufactured products in the world.
- ➔ Respiratory Distress Syndrome (RDS) remains a major problem in premature babies although its management has gradually changed over the years and led to improved survival in very young children but with a possible increase in the rates of bronchopulmonary dysplasia (BPD) at least in part due to reduced use of postnatal steroid. From 2006, a team of young men from various European countries have met every three years to review high quality literature and agree on a comprehensive recommendation for proper treatment of premature babies with RDS and at risk of RDS achieving better and better newborn outcomes.

1.3 OBJECTIVES

- **To find out most selling Natural surfactant brands.**
- **To find out most selling Natural surfactant dosage strength.**
- **To find out the Dose per Kg required of Natural Surfactant.**

1.4 RESEARCH METHODOLOGY

- **1.4.1 Research Design:** - Descriptive as well as exploratory research.
- **1.4.2 Data Source:** - Primary and Secondary data.
- **1.4.3 Data Collection Type:** - Structured Questionnaires
- **1.4.4 Sample size:** - 33
- **1.4.5 Study Area:** Ahmedabad

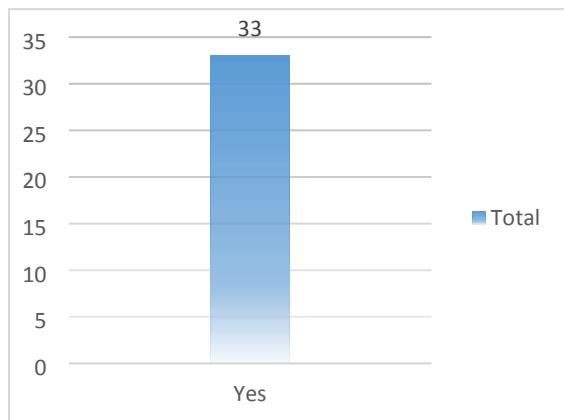
1.5 QUESTIONNAIRES:

- 1. Do you prescribe any natural surfactant?**
- 2. What are the preferred brand of Natural surfactant (Alveofact)?**
- 3. What are the dosage form you preferred?**
- 4. What are the indications?**

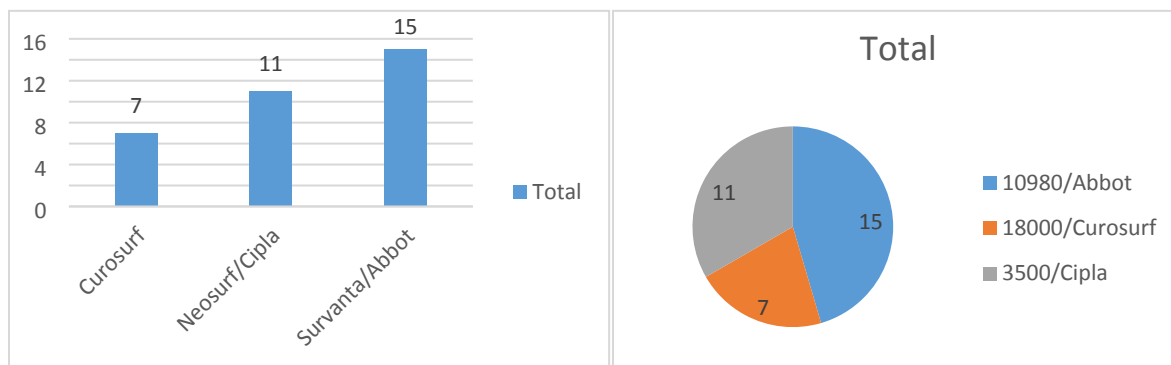
1.6 DATA ANALYSIS AND INTERPRETATION:

The feedback response are calculated in percentage and interpreted by using Pie Chart and Bar Graphs.

- Do You Prescribe any Natural Surfactant (Alveofact)?

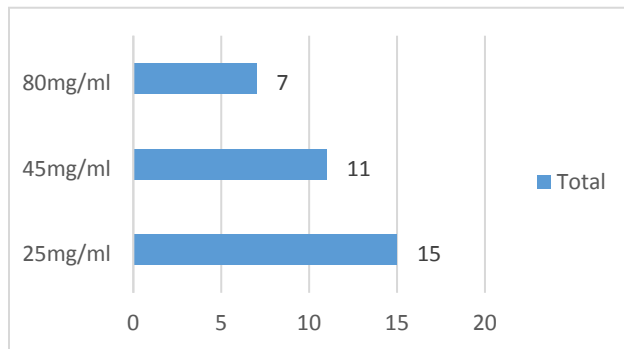


- **Interpretation:** The above Figure shows response of Doctors who are prescribing Natural Surfactant (Alveofact)
- **What are the preferred brand of Natural Surfactant? Price of Brands.**



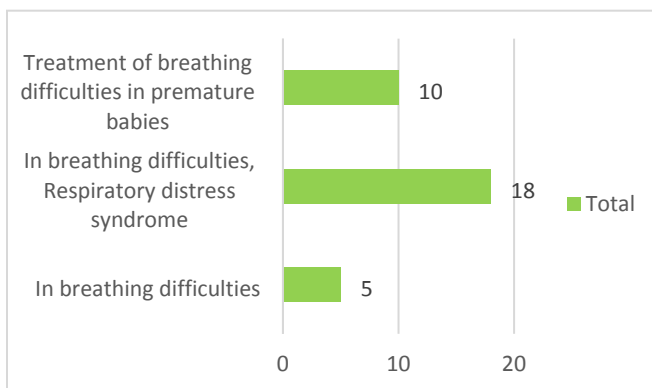
- Interpretation: The above figure shown the two different preferred brands for the Natural Surfactant (Alveofact) and their price in market.

- **How much dose you mostly preferred?**



Interpretation: As shown in the above graph shows the different dose which is mostly preferred by doctors.

- **What are the indications?**



Interpretation: In above figure it's clearly shows that the Natural Surfactant (Alveofact) is mostly used in Respiratory Distress Syndrome in premature babies.

1.7 CONCLUSION:

From this survey I conclude that the ratio of the doctors who are prescribing the Natural Surfactant (Alveofact) is about 100%.

Also they use different brands of that product and different doses required as per the condition of the babies. There are different brands available in different prices in the market.

They used this Alveofact mostly in Respiratory Distress Syndrome, Breathing difficulties in babies who are premature.

REFERENCE:

- West, John B. (1994). Respiratory physiology-- the essentials. Baltimore: Williams & Wilkins. [ISBN 0-683-08937-4](#).
- Wright, Jo Rae (2004). "Host Defense Functions of Pulmonary Surfactant". *Biology of the Neonate*. 85 (4): 326–32. [doi:10.1159/000078172](#). [PMID 15211087](#)
- Albon, Norman (1978). "[Nature of the gel to liquid crystal transition of synthetic phosphatidylcholines](#)". *Proceedings of the National Academy of Sciences of the United States of America*.
- Schurch, S.; Lee, Martin; Gehr, Peter; Qanbar, R; Schürch, S (1992). "Pulmonary surfactant: Surface properties and function of alveolar and airway surfactant". *Pure and Applied Chemistry*. 64 (11): 209–20. [doi:10.1351/pac199264111745](#).
- Hills, B. A. (1999). "[An alternative view of the role\(s\) of surfactant and the alveolar model](#)". *Journal of Applied Physiology*. 87 (5): 1567–83. [PMID 10562593](#).
- Nkadi, Paul O.; Merritt, T. Allen; Pillers, De-Ann M. (2009). "[An overview of pulmonary surfactant in the neonate: Genetics, metabolism,](#)

[and the role of surfactant in health and disease".](#) Molecular Genetics and Metabolism.

- Wright, Jo Rae (2004). "Host Defense Functions of Pulmonary Surfactant". Biology of the Neonate. [doi:10.1159/000078172](https://doi.org/10.1159/000078172). PMID 15211087.



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