Theophylline (1-3 dimethylxanthine), is a bronchodilator medicine.

- It treats pulmonary diseases such as asthma and COPD (chronic obstructive pulmonary disease).
- It’s inexpensive and easily obtainable

Quantification of Theophylline is necessary to guarantee patient safety & efficacy as a bronchodilator.

Doses below the therapeutic range are inefficient & doses above that can cause cardiac arrhythmia, convulsions, and death.

**Purpose & Impact of Research**

This research aims to successfully quantify Theophylline in breast milk to prevent the intoxication of Moms and infants.

**Benefits**

- Provides mother and infant with safety
- Inexpensive
- Non-invasive
- Fast and easy to use
- Timely results

**Conclusion and Future**

- A sensitive, selective, and accurate (85%) sensor was successfully developed in the desired range.
- Future Theophylline quantification can become mobile, through device insertion.

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**References**