

5. Summary and discussion

The currently available complete blood count (CBC) testing only provides volumetric information and hemoglobin concentration associated with a population of RBCs. We show that by combining FTLS and the Born approximation more comprehensive information such as diameter, thickness, and the depth and width of the dimple region may be obtained. The calculation time is on the order of a few seconds, which is a dramatic improvement over simulation techniques such as FDTD. We believe that this approach can potentially be used as a point of care technology, especially benefiting areas where expensive equipment and human expertise are not abundant.

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