

## **HAND-HELD NIR SPECTROMETRY : STATUS, TRENDS AND FUTURISTIC PROSPECTS**

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In 1989, at the 2nd ICNIRS Meeting in Tsukuba, I projected certain directions for NIR technology would take in the future. Among those projections were: (1) An inrush of companies producing FT-NIR instruments. (2) Hybrid NIR Systems (3) Hand-held NIR Technology. All three thrusts have resulted in numerous commercial offerings over the last 12 years

Hand-held technology for all fields is growing at an astonishing rate. To date, NIR work at North Carolina State University has produced four (4) hand-held NIR units for: (1) Nicotine and Moisture in tobacco, (2) Vanillin and Moisture in Vanilla Beans, (3) Protein, Moisture and Nitrogen in plant tissue, (4) Chlorophyll and Moisture in Growing Plants: A NIR Spectrometer for Developing Countries. This paper will discuss these developments, including design and performance data.