

Implementing Agencies:
C-DAC, Kolkata & Sensor Hub, Kolkata

OBJECTIVES

- ❑ Assessment of finished tea quality.
- ❑ Determination of optimum fermentation time for tea during manufacturing.
- ❑ Additional test beds for Cheese Ripening and Jasmine Extracts.

APPLICATIONS

- ❑ Reliable prediction of Tea-Taster like Score of Finished Tea.
- ❑ Online Plot of Fermentation Profile for End-point detection.
- ❑ Quality Analysis of Floral Extracts, like Jasmine, Rose, etc.
- ❑ Quality estimation of Spices.
- ❑ Breathe Analysis for Diabetes detection.

DEVELOPMENT PLATFORM

HARDWARE:

- ❑ Microchip 16-bit Controller
- ❑ TFT Touch Screen
- ❑ SD Card Interface
- ❑ In-built graphics support

SOFTWARE:

- ❑ Firmware in C
- ❑ Touch screen based GUI Interface

DESIGN IS BASED ON:

- ❑ The PIC 24FJ256DA210 (100pin) processor interfaced to a 4.3" (480*272) Display with touch screen support.
- ❑ Sensors developed by Sensor Hub, Kolkata.
- ❑ 16 bit RGB interface.
- ❑ Processor is clocked from an 8MHz crystal with a secondary oscillator of 32 KHz.
- ❑ A rechargeable Li-ion Battery (12 V).

FEATURES

- ❑ Small portable device with graphical User interface with touch screen.
- ❑ Integrated sniffing unit.
- ❑ Powered by Battery as well as AC Adaptor.
- ❑ Data storage in FAT File system in SD Card memory.
- ❑ Indigenous MOS Sensors developed by Sensor Hub, Kolkata.



HEN Sensor Array



HEN sample holder attachment



HEN with sniffing attachment and sample holder



Inner view of HEN with PIC Controller Card and Miniature pump

AWARD RECEIVED

Winner in "Rural IT & e-Governance" category in Intel India Embedded Challenge 2011 Contest held at Intel Technology India Private Ltd., Bangalore during August 18-19, 2011.

Runner-up Award in CSI YITPA – 2013 Regional Round (Eastern) Contest held at Kolkata in January 2014.



C-DAC, Kolkata team receiving Winner Award of the Intel India Embedded Challenge – 2011.

The product is commercially manufactured, marketed and maintained by the following Technology Partner of C-DAC Kolkata

- © M/s. Nagarjuna Fertilizers & Chemicals Ltd., 1, Nagarjuna Hills, Panjagutta, Hyderabad – 500 082; Ph: 040 2335067 / 23350232; E-mail: vijay@ikisan.com.



C-DAC, Kolkata team receiving Runner-up Award in CSI YITPA – 2013 Regional Round Contest.