

SimpleScan is a turn-key concentration measurement scanner (*i.e.*, sniffer) used for spot sampling ambient methane and carbon dioxide gas concentrations. SimpleScan uses an air intake probe to passively sample ambient air at 1 liter per minute, and concentration measurements are taken each second. SimpleScan should be placed in close proximity to the animal's muzzle to minimize sample dilution in an area of the pen that animals will access multiple times daily (*e.g.*, robotic milker). Typically, gas concentrations from cattle breath are diluted 10 to 100-fold by ambient air before the air intake nozzle collects a small subsample for concentration measurement. SimpleScan can detect rumination, ratios of CH_4 to CO_2 , which can indicate changes in diet or intake, and respiratory quotient (the ratio of CO_2 to Q_2) which can help determine an animal's metabolic state. **SimpleScan is an on-farm management tool to easily evaluate gas ratios for quick diagnostics and is not recommended for use in genetic evaluation, nutrition and dietary analysis, and whole farm carbon inventories.**

STANDARD FEATURES

- CH₄ tunable diode laser sensor (measurement range: 0 to 4% with a 0.5 ppm resolution)
- CO₂ non-dispersive infrared sensor (measurement range: 0 to 2%)
- An online user interface to monitor data

ADDITIONAL FEATURES

- RFID reader
- Head proximity sensor
- O₂sensor
- H₂sensor
- Humidity sensor

