COMPARISON: H_2S MEASUREMENT TECHNOLOGIES

Measurement Technology	Tape Method - ASTM approved	UV-Vis / SW-NIR Absorbance Spectrophotometry	Tunable Diode Laser TDL	Electrochemical
Cost	✔Cost-Effective	**X** Significantly higher cost than Tape Method	**X** Significantly higher cost than Tape Method	✔Cost-Effective
ASTM approved methods	✔YES D4084-82, D4468-85, & D4045-81	**X** NO	**X** NO	**X** NO
Specific to H2S only	✔YES directly measures H2S without interferences. No false positives	**X** NO Interference with mercaptans (including naturally occurring mercaptans), hydrogen, ammonia, etc. giving false positives	**X** NO Interference with moisture and other sulfur components giving false positives	**X** NO Interference with mercaptans (including naturally occurring mercaptans), hydrogen, ammonia, etc. giving false positives
Accuracy	✔ ± 2% of full scale typical	±10% at 0-10ppm FS	**X** ± 4ppmv 0-10ppm FS	± 3-5% of FS
Sensor Zero Drift	✔NO zero drift (automatic self zero, no zero air required)	**X** YES 5% in 24 hours for low ppm ranges	**X** YES	**X** YES
Versatility	✔YES maintains accuracy despite process changes	**X** NO	**X** NO not versatile (loses accuracy with process changes requiring adjustment calibration)	**X** NO
Range	✔ PPB, PPM and up to 100% ranges with high accuracy	**X** Low ppm ranges not reliable	**X** Low ppm ranges not reliable	**X** Low ppm ranges not reliable
Calibration Stability	✔ Long-term even in demanding environments and process changes	**X** Unstable if process changes even slightly. Requires calibrations	**X** Unstable if process changes even slightly. Requires calibrations	**X** Requires monthly or bi-monthly calibrations
Innately Linear response	✔ Yes	**X** No	**X** No	**X** No
Maintenance	✔ LOW Tape change only 3 to 4 times per year	**X** HIGH Optics require frequent cleaning once a month or more	Optics require cleaning	Minimal
Consumables	✔ LOW tape & solution change every 3 or 4 months only	**X** Light source and scrubber materials require replacement	**X** Membrane separator/ Scrubber (Copper nanoparticle) replaced every year	Minimal

NOTE: Measurement methods and the data listed are not specific to any manufacturer and may vary. Data taken from product literature from various manufactures

ANALYTICAL SYSTEMSKECO | (281) 516-3950 FAX (281) 351-8925
Sales@ASIKECO.com www.ASIKECO.com