	Analog DEF Refractometer	MISCO Digital DEF Refractometer
	ISO standard 22241-2:2006 calls for DEF to be 32.5% (+/-0.7%)	
Precision	Under best conditions +/-1%. Impossible to tell if DEF meets ISO standard.	High precision +/-0.1%.
Scale Divisions	Tiny scale divisions of 0.5% are difficult to see. Especially when viewed with glasses or safety glasses.	Scale divisions are 0.1%. Large LCD display is easy to read.
Range	15 to 40 %	0 to 50 %
Temperature Compensation	*NONE* Refractometers are very temperature dependent. Without compensation, small changes in temperature cause reading errors. There is roughly a 1.5% concentration error for each 10 °C for DEF fluids. A 32.5% Urea solution will read ~30.5% on a non-temperature compensated refractometer at 95°F (35°C).	*Based Specifically on Urea.* Digital temperature compensation improves the accuracy of readings. Compensation is non-linear, applying different corrections for different temperature and concentration combinations.
Made In	China	USA
Display Type	*Analog* Analog displays are subjective. Each person may read where the shadowline crosses the scale differently. Must be read in bright light.	*Digital* Digital displays are not subjective. The Palm Abbe has a large back-lit LCD display.
Sensor Material	Simple Glass	Sapphire - Next hardest substance to diamond. Virtually scratch proof.
Number of scales	One scale for DEF	Up to five scales for DEF, engine coolant, brake fluid, windshield washer fluid, and others.
Calibration	Water Only. Must turn tiny screw with tiny screwdriver while looking through eyepiece.	Zero Set (+Span Set to NIST traceable fluids available). Calibrates with touch of a button.
Safety	Must bring DEF fluid up to your face to take a reading.	DEF sample never comes near your face.
Scale Basis	Scale has unknown relationship between refractive index and concentration.	Relationship for MISCO DEF scale established using NIST traceable fluids and extensive testing by nearly all major urea producers and equipment manufacturers.
Repairable	No	Yes