



LN <sub>2</sub> Comparison Calibrators	Model 7196
Low-cost calibrations to -196°C	
Simple to use	
Uncertainty less than 2 mK	

If you need to do calibrations at the triple point of argon but you don't want the complexity and cost of using an argon triple point cell, Hart's Model 7196 LN<sub>2</sub> Comparison Calibrators will solve your problems. And they do it for less than half the price of other argon triple point simulators.

The nominal boiling point of nitrogen is -196°C at one atmosphere of pressure. The defining triple point of argon is -189.3442°C. While there is a difference between the nominal boiling point of nitrogen and the argon triple point, the difference can be corrected for mathematically, and an uncertainty of less than 2 mK from the actual argon triple point is achievable.

Hart's LN<sub>2</sub> Comparison Calibrators consist of a super-insulated glass dewar, a high-purity copper block, and a precision-fit lid. The dewar is filled with LN<sub>2</sub> and the copper block is suspended in it;

an SPRT is inserted into the block and a comparison calibration is performed against your own calibrated SPRT. The Model 7196-4 includes four 8 mm (0.32") wells. The Model 7196-13 includes five 8 mm (0.32") wells and eight 6.35 mm (0.25") wells.

Hart's LN<sub>2</sub> Comparison Calibrators are neither expensive nor complicated to use. If you need supporting data or would like to discuss the theory of operation of an LN<sub>2</sub> Comparison Calibrator, call Hart Scientific today. Or come to one of our training courses and we'll show you.

### Specifications

Temperature	Nominal -196°C depending on atmospheric pressure
Thermal Wells	<b>7196-4:</b> four 8 mm (0.32") I.D. wells <b>7196-13:</b> five 8 mm (0.32") I.D. wells, eight 6.35 mm (0.25") I.D. wells Both blocks: 275 mm immersion from top of lid to bottom of well, 150 mm immersion into copper block
Dimensions	180 mm O.D. x 385 mm high
Temperature Uniformity	Typically better than 2 mK
Volume	3.5 liters of liquid nitrogen

### Ordering Information

7196-4	LN <sub>2</sub> Comparison Calibrator, 4 holes
7196-13	LN <sub>2</sub> Comparison Calibrator, 13 holes

