

	Gravimetric Proton Density (%)*	NMR Signal to Pure Water Ratio (%)**	PD Uncertainty (%)***
PD-1	5	5.07	0.183
PD-2	10	10.23	0.370
PD-3	15	15.01	0.542
PD-4	20	20.68	0.747
PD-5	25	25.47	0.920
PD-6	30	29.98	1.083
PD-7	35	34.89	1.260
PD-8	40	39.76	1.436
PD-9	50	48.42	1.749
PD-10	60	59.13	2.135
PD-11	70	68.55	2.476
PD-12	80	78.35	2.830
PD-13	90	90.59	3.272
PD-14	100	99.55	3.595

Table 15. PD array values at 3.0 T.

**Measured at 20°C.
NIST traceable.**

*Gravimetric measurements of proton density will, in general, have less uncertainty than NMR-based measurements.

**The reported NMR proton density (PD) is the ratio of the NMR signal of the provided sample to an identical sample of pure water.

***The reported uncertainty is $u = 6\sigma_{PD}$, where σ is the standard deviation of the normalized NMR signal of identical, but independently measured, water samples. The uncertainty is the sum of the relative uncertainty in the sample measurement and the water reference measurement, each taken to be 3σ . There is >99.7% probability that the real values fall within the reported values $\pm u$.

Contrast sphere numbering is as appears when the phantom is viewed inferiorly

