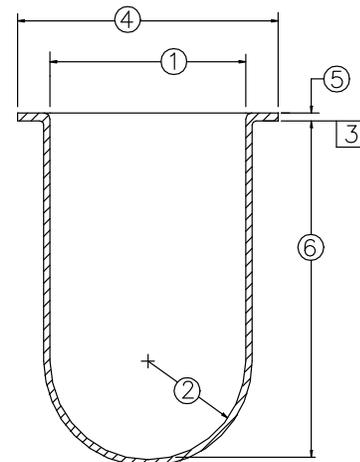
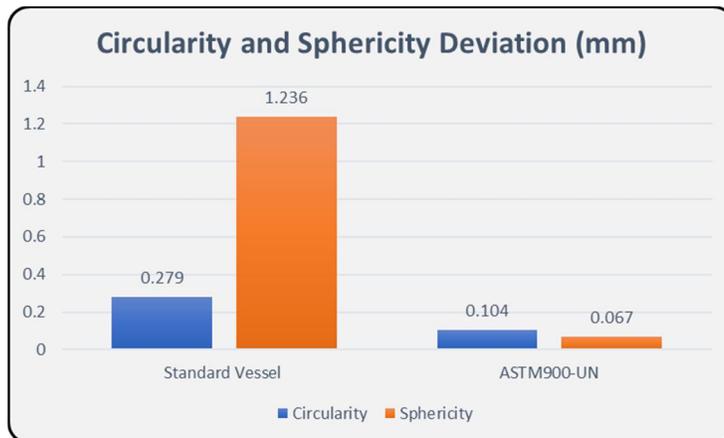


## UltraCenter™ Precision Vessels

Standard, hand-formed vessels have served the industry well for many years, and have provided acceptable test and qualification data. However, it has become clear that there is a need for a more dimensionally consistent vessel. Standard vessels, in some cases, were just not dimensionally consistent enough to produce reliable reproducibility for some dosage forms.

In response, QLA introduced the UltraCenter™ Precision vessel, which has been proven to be much more dimensionally accurate. Deviation from true circularity is reduced by 168% and deviation from true sphericity has been reduced by an incredible 1745% over standard vessels!

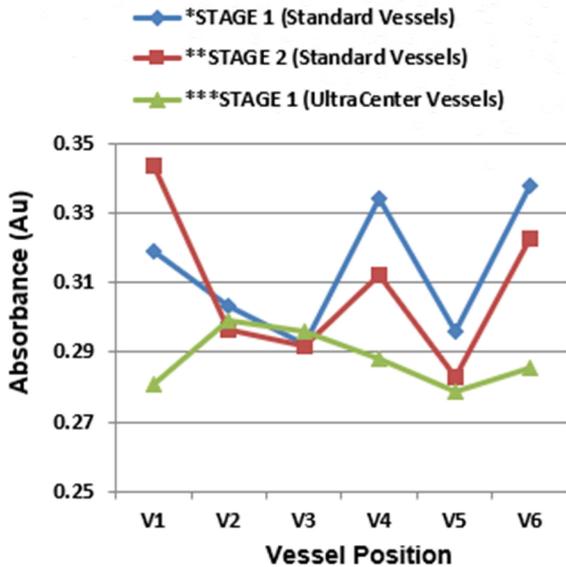
### Provides Ultimate Dimensional Accuracy



**UltraCenter™ vessels provide ultimate control of Dissolution variables (CV) and assist with Instrument Calibration in accordance with ASTM E2503 13E01**

1	Inside Dia.	101.19	+/- .20
2	Spherical Rad	50.59	+/- .20
3	Rim Perpendicularity	90°	+/- .30
4	Rim Diameter	133.00	+/- .20
5	Rim Thickness	3.75	+/- .20
6	Depth	161.25	+/- .20

To prove the UltraCenter™ vessel is superior to a standard vessel, we compiled real-world field data from a customer that was having trouble passing the Performance Verification Test (PVT). We replaced their standard vessels with the UltraCenter™ vessels and compared the results. The data shows the UltraCenter™ vessels produce significantly lower coefficient of variation (CV) results when compared to standard vessels used on the same instrument.



**Two-Stage Test Criteria (Lot #QOH398)  
Vessel Centering Data (Upper)**

	STAGE 1	STAGE 2
Geometric Mean (GM)	27-36	26-38
Percent of Coefficient Variation (%CV)	4.9	6.5

**PVT Results (Standard vs. UltraCenter)**

	GM	%CV
*STAGE 1 (Standard Vessel)	35	6.2
**STAGE 2 (Standard Vessel)	35	6.7 <b>FAIL</b>
***STAGE 1 (UltraCenter Vessel)	32	2.8 <b>PASS</b>

We immediately recommended that the customer upgrade to the UltraCenter™ vessel system. Initially, the customer was apprehensive due to the price of the upgrade but when we installed the vessels and brackets and presented them with this remarkable difference in the %CV they were convinced. Since then, this customer has outfitted all 18 of their testers with the UltraCenter™ vessel system. They have not only enjoyed a 100% PVT and ASTM-E2503 passage rate but have seen much more consistent product test data as well. An investment that saved countless hours of investigations and retesting.



**QLA UltraCenter™ Precision vessels are available in Glass Rim, Plastic Rim and Apex versions in both clear and amber colors. All vessels are serialized and come with a Certificate of Conformance (COC).**