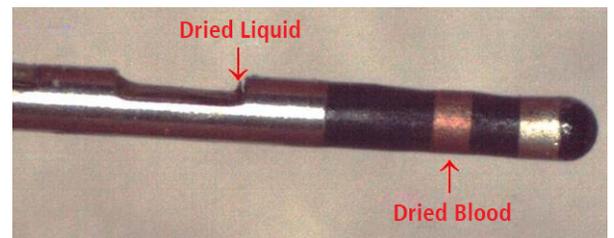
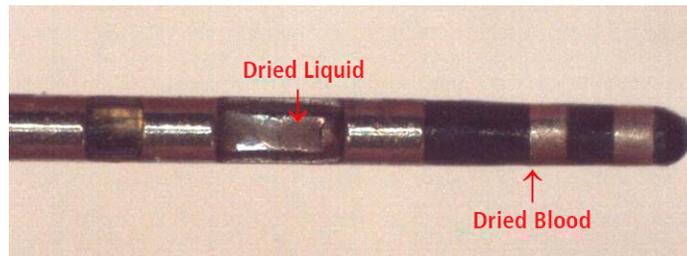


# Catheter Technical Note

## Effect of Catheter Cleaning on Performance

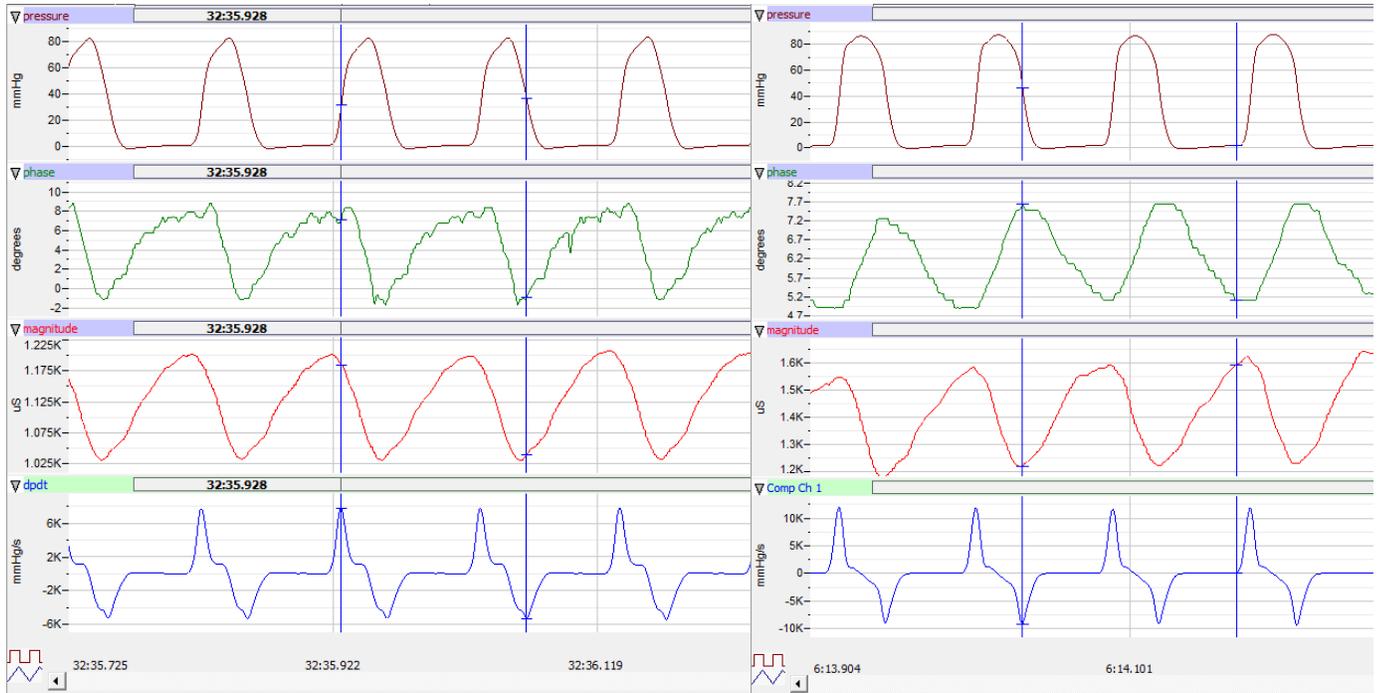
Proper Catheter cleaning ensures proper performance of pressure and pressure-volume systems and the ability to confidently present good data. Catheter cleaning is a very important duty and requires specific attention post each procedure. Soiled Catheters are not able to perform at their best even if the best position is found in the heart cavity. For proper cleaning instruction please follow: Catheter Cleaning and Disinfecting Guide (CDS 2.06). It is important to visually inspect Catheters under a microscope after cleaning to ensure that all contaminants have been removed. Particularly stubborn soil may require additional cleaning cycles to fully remove.

It is important to note that there are many other factors, besides Catheter cleanliness, which impact performance. See How to Optimize Catheter Life Span (RPV-200-tn) for more information on Catheter use best practices. Additionally, improper PV Catheter positioning within the ventricle can produce anomalous data. Follow the instructions in the PV Catheter Positioning Guide (CDS 2.03) for ideal Catheter placement.



**1.2F Rodent Pressure Volume Catheter before (top images) and after (bottom images) proper cleaning. A 30 min wash in 1% Tergezime (Alconox Inc.) removes the dried liquid and blood. See Catheter Cleaning and Disinfecting Guide (CDS 2.06) for complete instructions.**

# Effect of Catheter Cleaning on Performance Cont.



Data from a Catheter before proper cleaning (left) and after proper cleaning (right) in the LV of a mouse. Note the degraded quality of the phase signal with the dirty Catheter which shows increased variability and lacks the ideal sinusoidal shape seen with the clean Catheter. The magnitude and dP/dt graphs both shows damping from the dirty Catheter, see table below for values. Additionally, left ventricle pressure signal can be dampened by tissue or dried liquid present on the Catheter, constricting the sensor to the point where it damages the pressure sensing surface inside.

PV PARAMETERS	EXAMPLE DIRTY CATHETER VALUES	CLEAN (EXPECTED) CATHETER VALUES
Pressure (mmHg)	systolic: < 90 diastolic: < 6	systolic: 90-120 diastolic: 1-6
Phase (degrees)	0 - 10 and above	4 - 8
Magnitude (uS)	high to low variation < 200	high to low variation > 200
dP/dt max (mmHg/s)	< 4000	6000 - 10000, up to 17000

Mouse under 1.5% isoflurane anesthesia with heart rate between 500-600 bpm



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