

Tips and Tricks

Slide Handling

- Frozen slides should be run frozen, no thawing needed
- Load slides and clips within 5 minutes of opening foil package

IDEXX IN HOUSE Catalyst One

- **Lyte 4 Clips should be run within 2 minutes of opening the foil package**
- Lyte 4 CLIPS should always be loaded before other CLIPS/slides. Here is the optimal order:
1: Lyte 4 clips 2: Chemistry clips 3: SDMA 4: Total T4 5: Any additional slides on top

Cleaning and Maintenance

You will need: gloves, 4 or more alcohol prep pads, and optical tissues.

Tap the **Catalyst One** icon on the homescreen. Tap **Maintenance**, tap **Clean**. There will be on screen instructions to follow on the vet lab station.

1. Open the side door, raise the carousel cover until the green lever magnetizes itself to the top of the analyzer.
2. Lift up on the carousel and remove it.
3. Using an IDEXX-supported alcohol prep pad, wipe the incubator ring and optical window in counter clockwise direction, repeat at least 3 times using a new alcohol prep pad each time.
4. Clean the reference tile on the bottom of the carousel using a new alcohol prep pad.
5. Using a dry optical tissue, dry the optics window and white reference tile, ensuring everything is all dry and evaporated.
6. If streaks or smudges remain, repeat.
7. Replace the carousel, lower the cover until it firmly clicks in place, and close the side door.
8. Tap **Done** on the vet lab station screen.

Quality Control

IDEXX recommends that you perform quality control testing when prompted after a monthly cleaning of the internal components. Always clean before running quality control.

Follow the instructions for your control fluid as they vary depending on the type of control you are preparing. These instructions should be included with each individual product, in the Catalyst One Operating Guide on pages 27-28, or on screen instructions will show on the Vet lab Station screen.

You will need: a QC CLIP, a Lyte 4 CLIP, Vet Trol control fluids.

1. Tap the **Catalyst One** icon on the VetLab Station home screen, tap **Maintenance** and then tap **Quality Control**. Select appropriate lot number/add a new lot number if needed, then tap **Run QC**. Can show on-screen instructions to follow for preparing the Vet Trol control fluid or cleaning the machine, otherwise tap next and load the materials.
2. Open the sample drawer and ensure all pipette tips are loaded. Load 300µL of prepared control fluids in a sample cup into the sample cup slot. Load the Lyte 4 CLIP first, then the Quality Control CLIP, in the slide holder.
3. Close the drawer and hit the start button on the Catalyst One.

Diluting Samples On The Catalyst One

- Dilutions should only be performed when a test value is outside the reportable range or when the sample contains interfering substances.

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- Only dilute tests with results outside of the reportable range. Diluting with results in the normal range may produce invalid results. The analyzer will inform you when a dilution is necessary to receive accurate results.
- Do not dilute small samples to achieve a minimum sample volume. Such dilutions on normal analyte concentration cannot be read accurately. When dilution is needed to determine some analytes at very high concentration, the sample should be diluted manually.
- Do not perform a manual or automated dilution on electrolytes, NH₃, PHBR, TT4, SDMA, FRU, BA, or PROG tests, or on whole blood samples
- All chemistries should be analyzed first on the undiluted sample. Some analytes, such as GGT and total bilirubin, have low serum/plasma concentration and may be diluted out even with the lowest dilution.
- For best results, start with a 1:2 dilution (1 part sample to 1 part diluent). Do not exceed 9 parts diluent.
- If additional dilutions beyond 1:2 are necessary, always begin with the original, undiluted sample. Then, incrementally increase the parts diluent. (You can find more detailed instruction and a dilution chart if needed in the Catalyst One Operators Guide.)
- Always use an accurate measuring device (calibrated pipette or syringe).

Proper Diluent Material for your Sample Type

- For plasma and serum samples, use normal saline
- IDEXX does not recommend manually diluting whole blood in a Catalyst whole blood separator, only dilute the separated plasma
- For urine, use Catalyst Urine P:C Diluent

Minimum Sample Volume for Dilutions

The minimum sample volume varies based on the dilution factor and the number of slides that are being diluted (see table below).

| Parts sample + parts diluent + diluent ratio | Max number of slides per dilution | Minimum Sample Volume: Serum, plasma, or urine | Minimum sample volume: Whole blood | Diluent volume |
|--|-----------------------------------|--|------------------------------------|----------------|
| 1 + 1 = 1:2 | 5 | 155µL | 700µL | 300µL |
| 1 + 3 = 1:4 | 10 | 130µL | 700µL | 300µL |
| 1 + 5 = 1:6 | 10 | 130µL | 700µL | 300µL |
| 1 + 9 = 1:10 | 10 | 100µL | 700µL | 300µL |

If additional dilutions beyond 1:2 are necessary, always begin with the original, undiluted sample. Then, incrementally increase the parts diluent. (You can find more detailed instructions and a dilution chart if needed in the Catalyst One Operators Guide.)

Running An Automated Dilution

Note: An automated dilution run will be canceled if there is insufficient diluent/sample volume or there are too many slides in the run.

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 - **You will need:** Whole blood or serum, 300µL of normal saline in a sample cup, an empty sample cup, and any CLIPS/slides
1. Initiate the run by first selecting your patient from the homescreen pending/census list, or tap **Analyze Sample** to search for a patient, or add a new one if needed. Always confirm patient info.
 2. Select **Catalyst One** icon, then tap **Run Dilution**, select the automated option, and use the up/down arrows to specify the dilution factor, tap **Run**.
 3. When prompted, open the sample drawer and ensure all pipette tips are loaded, load the sample, load the sample slides (**note: only load the slide(s) that require a dilution. Do not load an entire CLIP**), load an empty sample cup into the front left holder, and a sample cup with 300µL of diluent (0.9% saline) into the front right cup holder.
 4. Press the start button on the Catalyst One.

Have questions? You can always hit the question mark button on the top of the IDEXX VetLab Station for advice and answers for frequently asked questions on a number of topics, or contact IDEXX Technical Support at **1-800-248-2483** .