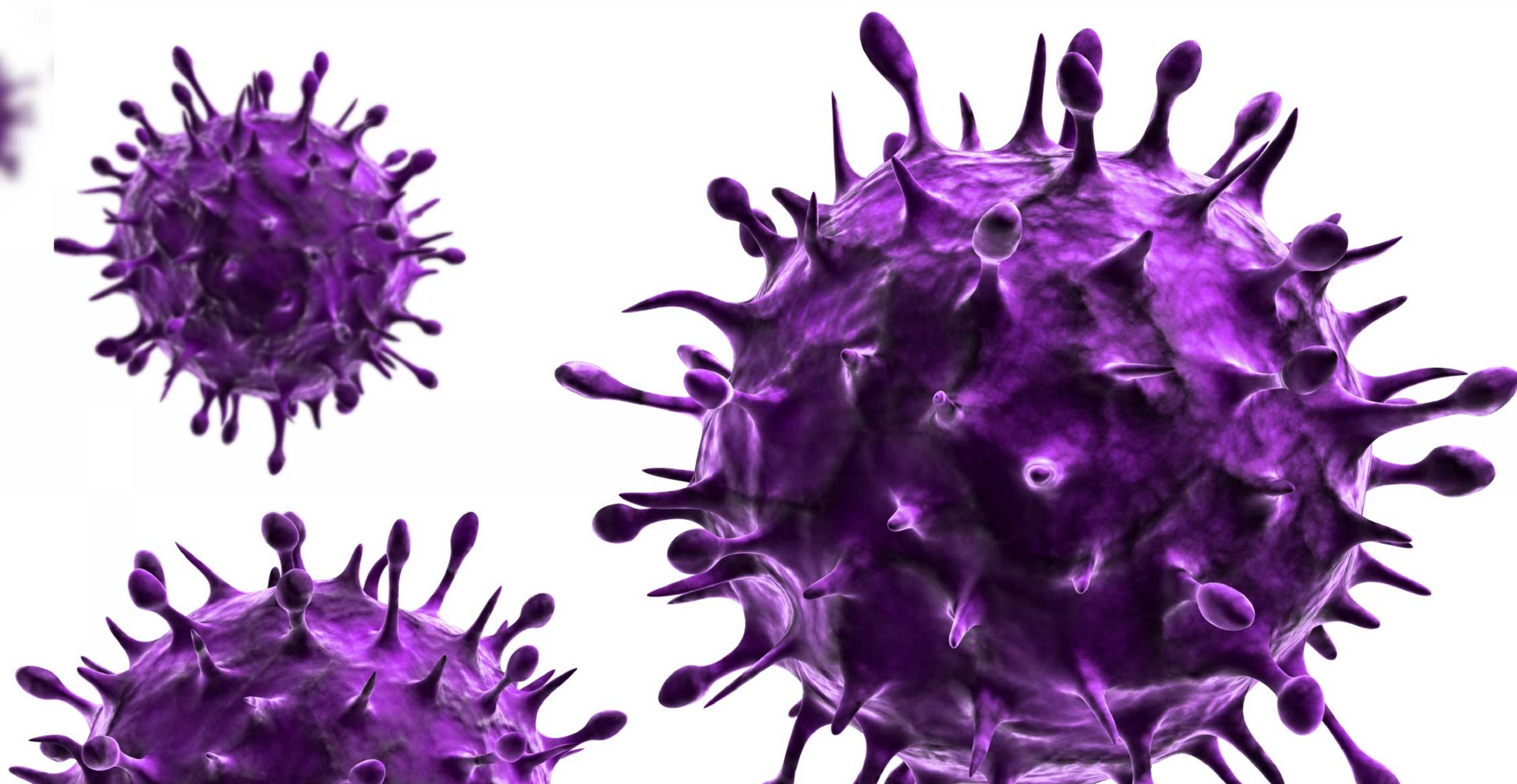


# PowerViral™ Environmental RNA/DNA Isolation Kit

**Cruise through your viral nucleic acid isolation**

- ✓ **Optimized for challenging samples** – Isolate viral and bacterial RNA & DNA from waste water, stool, biosolids and gut material
- ✓ **Inhibitor Removal Technology®** – Eliminates inhibitory substances, including polysaccharides, lipids and heme for pure nucleic acids that are ready to use in downstream applications
- ✓ **Optional bead beating protocol** – Available with Glass Bead Tubes for optimal lysis of solid samples and bacterial cells or without bead tubes for isolation of viral nucleic acids from liquid samples



中国区总代理

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Cruise through your viral nucleic acid isolation

Description

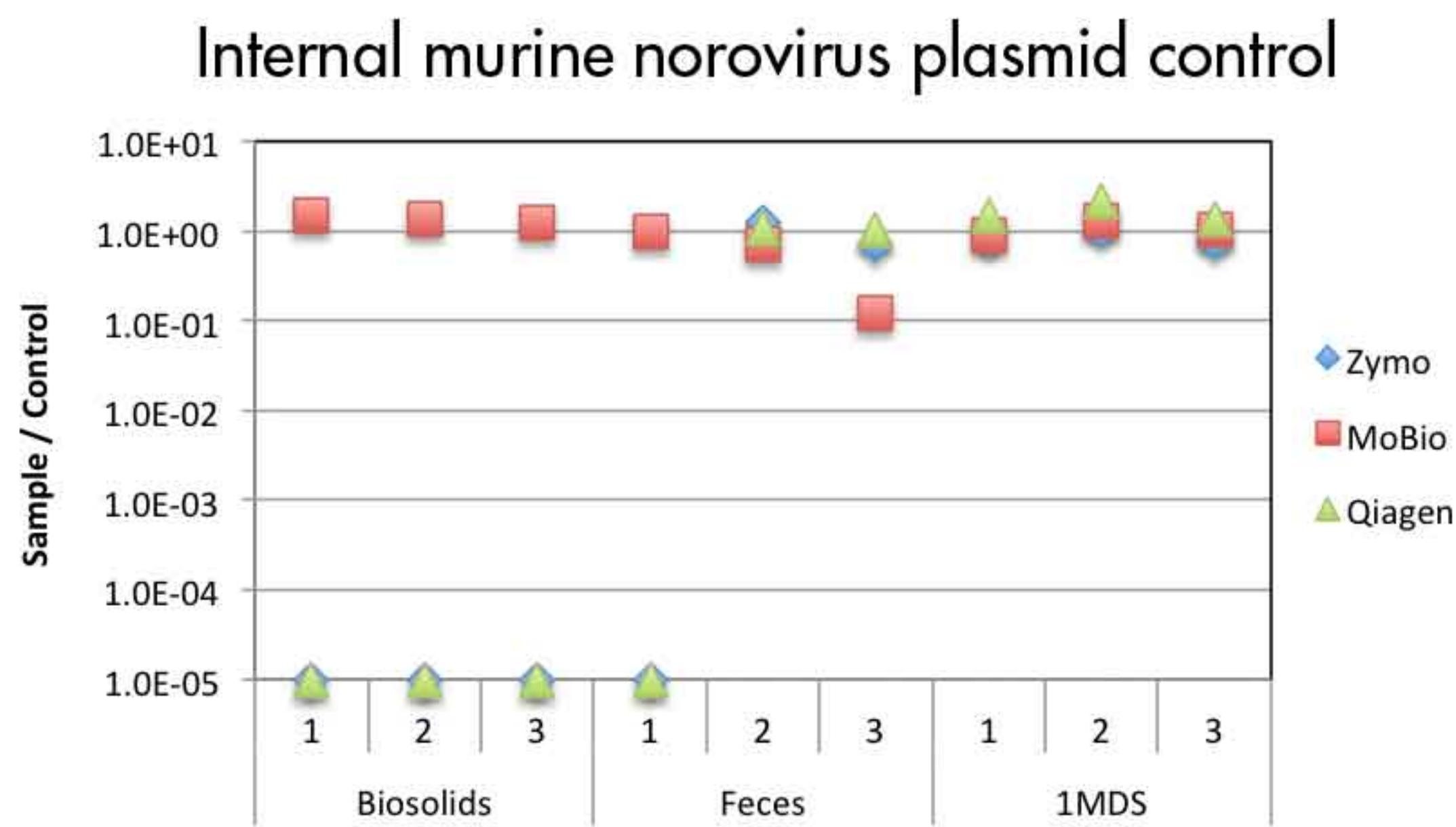
The PowerViral™ Environmental RNA/DNA Isolation Kit is designed for fast and easy purification of viral and bacterial total nucleic acids from samples high in PCR inhibitors; including waste water, stool, biosolids, and gut material. Patented Inhibitor Removal Technology® (IRT) ensures complete removal of the inhibitory substances often contained in these materials, such as undigested plant material in the gut or heme compounds from lysed red blood cells, abundant in stool. The result is pure DNA and RNA that is ready to use in the most demanding downstream applications. Nucleic acids are eluted in RNase-Free Water and ready for PCR, cDNA synthesis, RT-qPCR and more.

For stool samples or samples with a solid matrix, lysis is achieved using 0.1 mm Glass Bead Tubes, in combination with a strong chemical lysis buffer that ensures efficient extraction of tough microorganisms in the bead beating step. For viral nucleic acid extraction from water samples and samples that do not require dispersion, the bead beating step may be skipped and viral nucleic acids extracted through chemical lysis only. If lysis with Glass Bead Tubes is required, purchase Catalog # 28000-BUNDLE, which contains the PowerViral™ Environmental RNA/DNA Isolation Kit plus 0.1 mm Glass Bead Tubes. Otherwise, purchase Catalog # 28000-50 which is the PowerViral™ Environmental RNA/DNA Isolation Kit alone.

If additional DNase treatment is required, we recommend the RTS DNase™ Kit, Catalog # 15200-50.

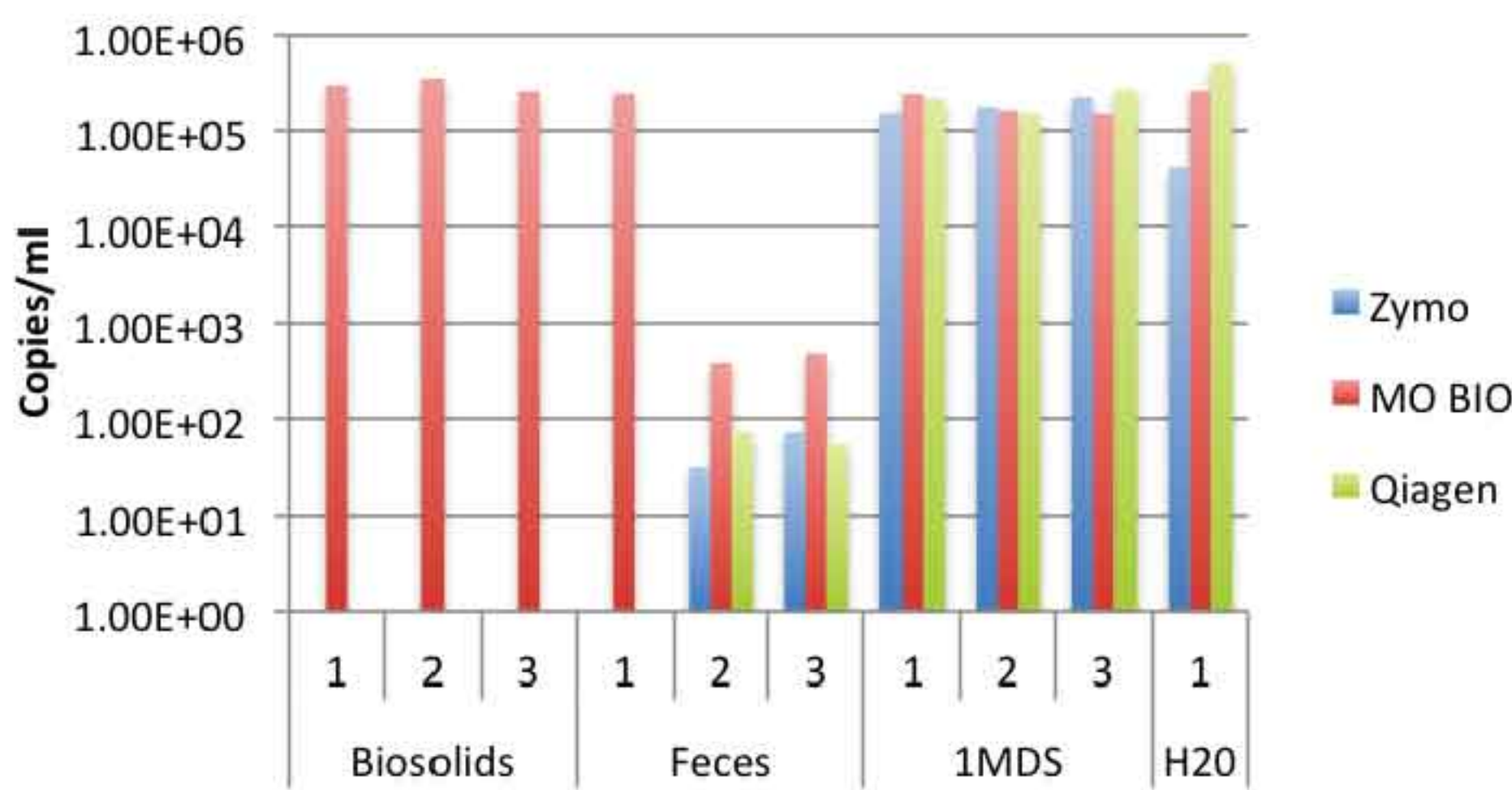
Fewer inhibitors and higher yields

Data courtesy of B. Iker, University of Arizona, Tucson, AZ.

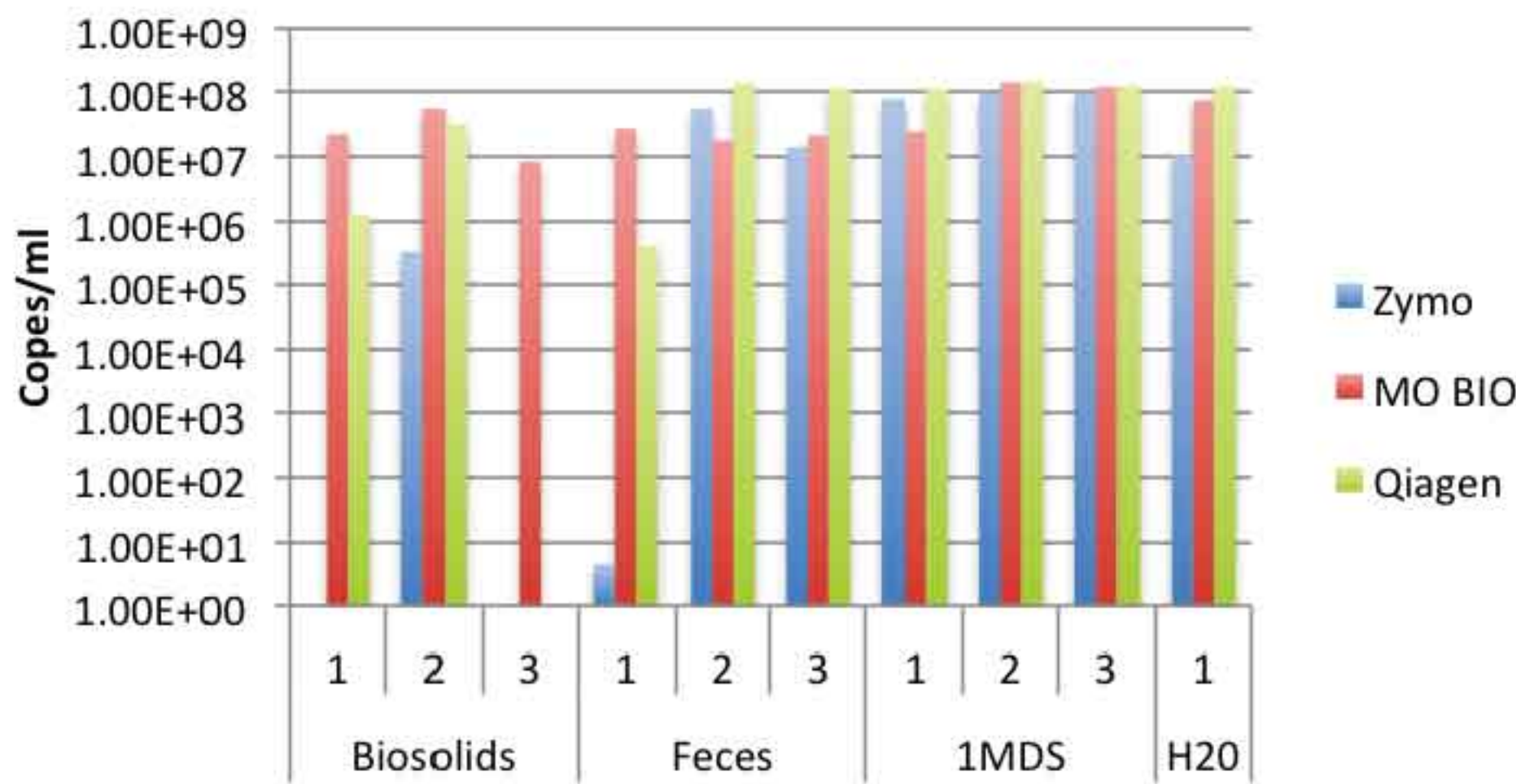


**Figure 1.** Fewer inhibitors were detected in nucleic acid samples isolated using the PowerViral™ Environmental RNA/DNA Isolation Kit. Assessment of the presence of qPCR inhibitors in the nucleic acid extracts from three separate extraction kits was performed via a qPCR inhibition test using an internal murine norovirus plasmid (pMNV) control (1.0 × 10<sup>5</sup> copies/PCR tube) in the presence of 2.5 µl of nucleic acid extract. Three samples (1, 2, and 3 on the horizontal axis) for each type of environmental sample matrix (biosolid extracts, fecal suspensions, and 1MDS surface water concentrates) were tested. Only PowerViral™ Environmental RNA/DNA Isolation Kit demonstrates better purification across all sample types. Data courtesy of B. Iker, University of Arizona, Tucson, AZ.

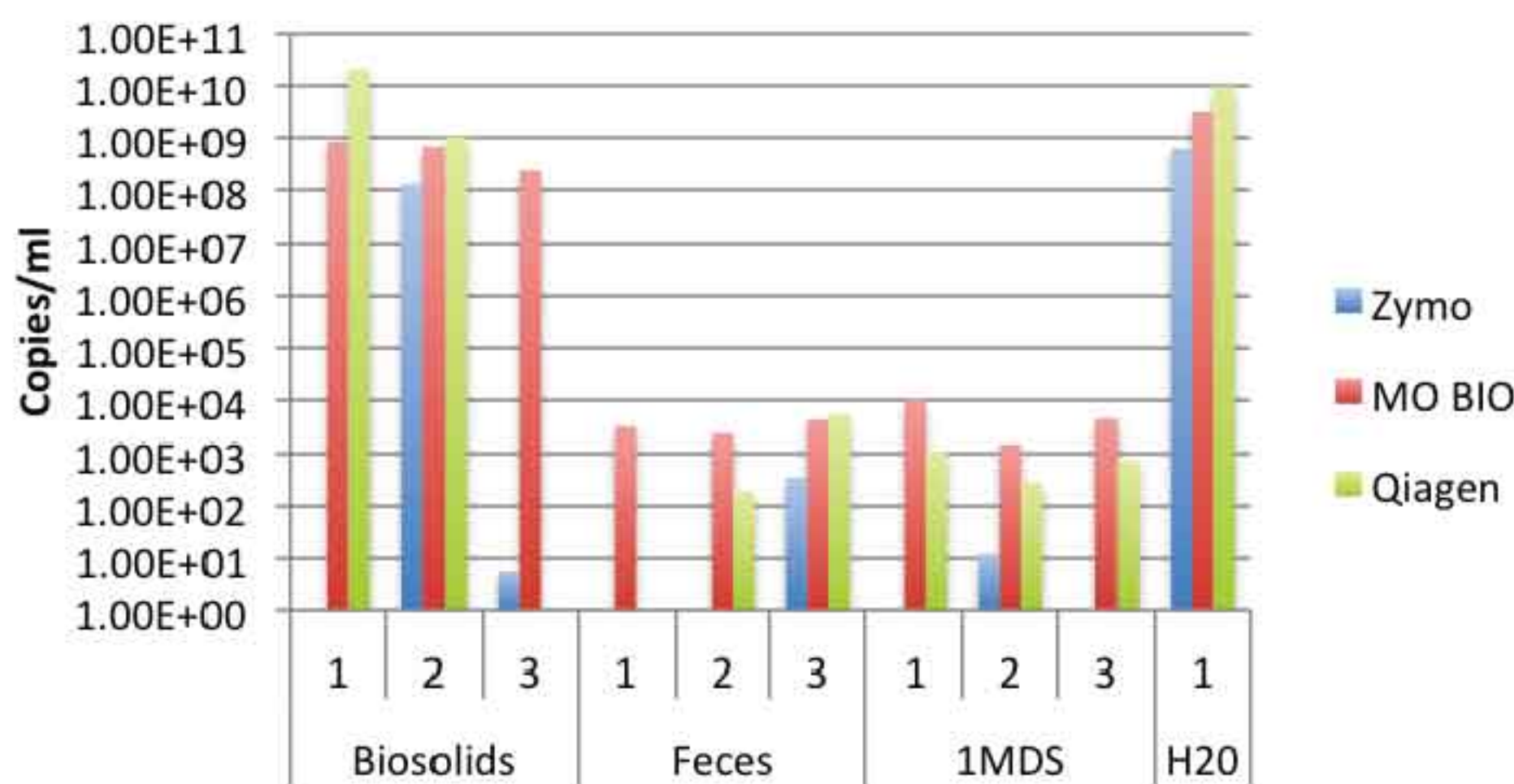
(A) AdV detection by sample matrices



(B) Polio detection by sample matrices



(C) MS2 detection by sample matrices



**Figure 2.** Higher yields of viral nucleic acids isolated using the PowerViral™ Environmental RNA/DNA Isolation Kit. Observed detection (log<sub>10</sub> copies/ml determined by qPCR) of A) adenovirus 2 (AdV); B) poliovirus type 1 (PV1); and C) Bacteriophage MS2 (MS2) extracted using MO BIO, Zymo, or Qiagen kits from spiked molecular grade water (extraction efficiency controls), biosolid extracts, fecal suspensions, and 1MDS surface water concentrates. Three samples (1, 2, and 3 on the horizontal axis) for each type of environmental sample matrix were spiked with each virus. To adjust for the difference between the three extraction kits in their loading and elution volumes, the concentrations of the original spiked viruses were calculated from the qPCR data and expressed as log<sub>10</sub> copies/ml. Only PowerViral™ Environmental RNA/DNA Isolation Kit detected viral nucleic acids from every sample type. Data courtesy of B. Iker, University of Arizona, Tucson, AZ.

Specifications

Format	Silica Spin Filter Tubes
Method	Bead Beating (optional)
Binding Capacity	Up to 20 µg per filter
Throughput	1 - 24 samples
Time	30 minutes
Starting Amount	0.25 g of solid material or 200 µl of liquid
Equipment Required	Vortex and Vortex Adapter (if using bead beating) Centrifuge

Order information

Catalog No.	Description	Quantity
28000-50	PowerViral™ Environmental RNA/DNA Isolation Kit	50 preps
28000-BUNDLE	PowerViral™ Environmental RNA/DNA Isolation Kit + Bead tubes	50 preps

中国区订购联系信息

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