



## Product Information

### VM20 Vacuum Manifold

Catalog Number **VM20**

## TECHNICAL BULLETIN

### Product Description

The VM20 Vacuum Manifold is designed to provide increased efficiency and performance when used with many of Sigma's column-based nucleic acid or protein purification systems. The manifold is capable of processing 20 samples simultaneously, and includes a stepped design for easy access to every column. Dual vacuum connection ports allow for multiple configurations for waste collection. Waste can be collected in the manifold body or diverted to any auxiliary reservoir providing virtually unlimited capacity. For added convenience, the manifold includes chemically resistant Endura-Luer stopcocks that will not crack or break with repeated use.

The VM20 Vacuum Manifold can be used with the following products:

Description	Catalog Number
GenElute™ HP Plasmid Miniprep Kits	NA0150S, NA0150, NA0160
GenElute™ Five-Minute Plasmid Miniprep Kits	PFM10, PFM50, PFM250
GenElute™ HP Plasmid Midiprep Kit	NA0200S, NA0200
GenElute™ HP Plasmid Maxiprep Kit	NA0300S, NA0300, NA0310
HIS-Select® Cartridge (1.25 ml capacity)	H8286
HIS-Select® High Flow Cartridge (1.25 ml capacity)	H7788
HIS-Select® High Flow Cartridge (6.4 ml capacity)	H7163

### Components Provided

Product Description	Catalog Number	Quantity
Sigma VM20 Vacuum	VM1	1 manifold
Endura-Luers	EL1	4 × 5 each
VM20 Accessory Pack	AP3	1 pack

### Equipment Required but not Provided

- Vacuum source capable of 500 mbar
- Tubing
- Vacuum Pump Trap Kit (57120-U or equivalent)
- External collection reservoir (optional)

### Stability

The manifold is manufactured from chemically resistant polypropylene, which is unaffected by standard nucleic acid purification reagents. The Endura-Luer stopcocks resist chemical degradation, eliminating cracking and breaking that occurs with other types of plastic.

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Vacuum should not exceed 1000 mbar. Always inspect the vacuum manifold for cracks and abrasions before use. If there are any signs of damage, discontinue use.

### Preparation Instructions

#### 1. Insert Endura-Luer stopcocks

Firmly insert narrow end of Endura-Luer stopcocks into manifold openings. Turn all Endura-Luer handles to horizontal "off" position until ready to use.

#### 2. Waste Collection

##### a. Assembly instructions for waste collection in the manifold body

Screw the cap onto the lower port, and the threaded nozzle on the upper port, as shown in **figure 1**. Connect tubing to nozzle. Connect to side-arm trap.

##### b. Assembly instructions for use with auxiliary reservoir

Screw the threaded nozzles on the upper and lower ports, as shown in **figure 2**. Connect vacuum source to upper nozzle. Connect side-arm trap to lower nozzle.

**Note:** Always use a thick-walled side arm flask as opposed to Erlenmeyer flask, which may be too thin to withstand the vacuum.

#### 3. Turn on vacuum source

The VM20 Vacuum Manifold is now ready for use.

**Note:** We recommend regularly emptying the vacuum manifold and rinsing thoroughly with clean water.



**Figure 1.** Collection of waste in the manifold body



**Figure 2.** Collection of waste in an auxiliary reservoir

Please refer to the table below for converting 500 millibars (mbar) to other vacuum units.

Vacuum Unit	500 mbar equivalent
Inches of mercury (inch Hg)	14.8
Millimeters of mercury (mm Hg)	375
Pounds per square inch (psi)	7.25
Atmospheres (atm)	0.49
Kilopascals (kPa)	50
Torrs (Torr)	375

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