Cryo Products

Do you have a question?

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Storage Systems

Biological Storage of 1.0-2.0ml vials

BASED ON:

- Racks with 13 levels for 10x10 and 5x5 boxes
- Boxes 10x10 and 5x5 divider

PRODUCT SPECIFICATIONS

Storage Vessel	Capacity without frame				Capacity with frame				
BRAND AND TYPE	LIQUID	GAS*	RACKS	BOXES	LIQUID*	GAS**	DRY GAS***	RACKS	BOXES
TW 10K	10.400	8.800	7 + 4	91 + 52	9.100	7.700	9.100	7	91
TW 24K	24.000	20.350	17 + 6	221 + 78	21.775	18.425	21.775	15 + 7	195 + 91
TW 38K	38.350	32.450	28 + 6	364 + 78	35.100	20.675	35.100	26 + 4	338 + 52
MVE 511	10.400	8.800	7 + 4	91 + 52	7.800	6.600	7.800	6	78
MVE 600/611	16.900	14.300	12 + 4	156 + 52	13.650	11.550	13.650	10 + 2	130 + 26
MVE 1400/1411	26.650	22.550	18 + 10	234 + 130	24.050	20.350	24.050	17 + 6	221 + 78
MVE 1841	38.350	32.450	28 + 6	364 + 78	35.100	20.675	35.100	26 + 4	338 + 52
MVE 810 ETERNE	15.600		12 + 4	144 + 48			15.600	12 + 4	144 + 48
MVE 1520 ETERNE	33.800		24 + 12	312 + 156			33.800	24 + 12	312 + 156
MVE 1830 ETERNE	79.950		54 + 30	702 + 390			79.950	54 + 30	702 + 390

Gas* for gas phase storage only 11 of the 13 levels will be used
Gas** with liquid frame and only 11 of the 13 levels will be used
Dry gas*** with watertight frame and all 13 levels will be used
Liquid* with open frame for easier handling

Other storage types such as straws, bloodbags, Sanbio Cups etc. on request available
Special storage racks, boxes and frames on request available
Also positioning and dry frames available for other vessels (brand / type)

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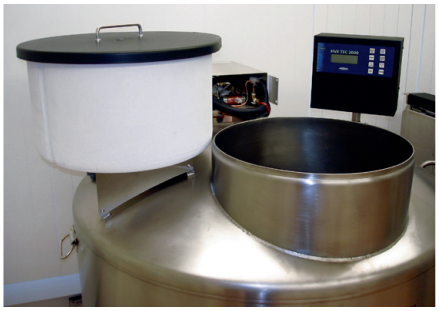
Biological Storage

TODAY WE KNOW THREE TYPES OF STORAGE OF SAMPLES IN NITROGEN VESSELS:

- In liquid nitrogen (-196C) where the samples are fully submerged in liquid N2
- In conventional gas phase (-150C) where the bottom two layers of the racks stand in liquid N2
- In “dry” gas phase (-170C / -190C) with a absolute separation between samples and liquid N2




“DRY” GAS PHASE STORAGE SYSTEMS

Almost all new biological storage vessels are equipped with a “dry” storage, this to ensure that there is absolute separation between the liquid nitrogen and the stored materials. Therefore change off cross contamination is minimized, it is safer for your staff as they can’t come in contact with liquid nitrogen or have to lift heavy with liquid nitrogen loaded racks. We know two types of “dry” storage either by means of a stainless steel and waterproof frame with diversions or by a special turn table (eterne series) above the liquid.

The “dry” storage by means of a frame has the following advantages:

- The easy and quick access to the racks, nitrogen consumption is higher.
- The temperature control in the “dry” gas phase of liquid nitrogen is better and more stable, as conventional gas phase, and the temperatures at which the materials are stored are lower (-170C) as in conventional gas storage (-150C).
- Due to the amount of steel cooled to liquid nitrogen level, it holds its temperature better and longer at low levels, even when the supply is cut off for a longer period.
- Your staff can work with the system in a easier and in a more relaxed way because each rack has its own partition, and the time that your material spends outside the cooling system is much shorter.
- This way of storing has no impact on your liquid nitrogen consumption.
- This system can be fitted in new vessels as well as in already existing vessels retrofitted (refurbish/up-grade).
- Frames are available for several brands of vessels (Taylor Wharton, Chart MVE, Cryo Anlagenbau, Air Liquide) and they come in all possible dimensions and executions (vials, straws, blood bags and Sanbio cups) and in all sizes for example 5,000 to 40,000 vials.

The (Eterne) turn table system has a couple of other big advantages due to the fact that the top is also vacuum insulated, and the vessel is equipped with a small neck opening.

- The temperature control in the gas phase of liquid nitrogen is better and more stable.
- The temperature at which the materials are stored are lower (-190C) as in “dry” storage in a frame (-170C).
- Due to small opening it holds it temperature better and longer when the lid is opened.
- The vacuum insulated top also insures that low temperature levels remain for a longer period when the liquid Nitrogen supply is cut off.
- This way of storing has a significant impact on your liquid nitrogen consumption as the consumption of this vessel is more than 30% less of a comparable “dry” frame vessel.