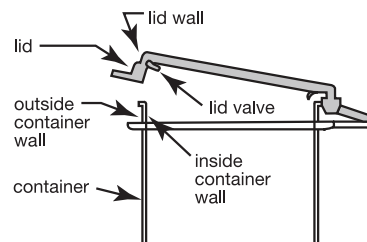


Thermo Scientific Capitol Vial Triple Seal Design

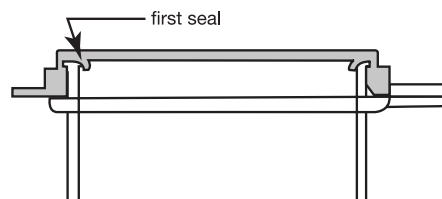
Figure #1 illustrates the critical aspects of the three seal design. The figure also depicts the position of the lid as it approaches the container during closing. The hinged design positions the lid at the appropriate angle to ensure proper closure.

Figure #1



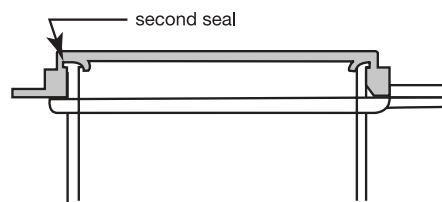
The first seal is formed by the union of the lid valve (figure #2) with the inside surface of the container wall. The integrity of this seal is obtained by forcing the top of the container into a small space between the valve and the wall of the lid. The structural interference encountered during closing and the shrinkage that occurs during the curing stage create the airtight seal.

Figure #2



The second seal is formed by the union of the top edge of the container wall (figure #3) and the inside wall of the lid. Similar to the first seal, it is a combination of structural interference and shrinkage that guarantees the integrity of the seal. This feature's primary function is to provide a leak-resistant seal that prevents fluids from entering or exiting the container.

Figure #3



The third seal is formed by the union of the outer wall of the container (figure #4) and the undercut around the inside wall of the lid. This seal provides another layer of protection against fluid ingress and egress and also determines the amount of internal air pressure the container will withstand. The level of internal air pressure is controlled by the ratio of surface contact to undercut.

Figure #4

