Mouthpieces and Sample Port Operation

Wall Mount 3 and Wall Mount 4 Sample Port Operation

The Wall Mount 3 and Wall Mount 4 receive a breath sample from the donor via a disposable straw (wrapped or unwrapped) which is inserted into the sample port as shown in Figure 1 below.

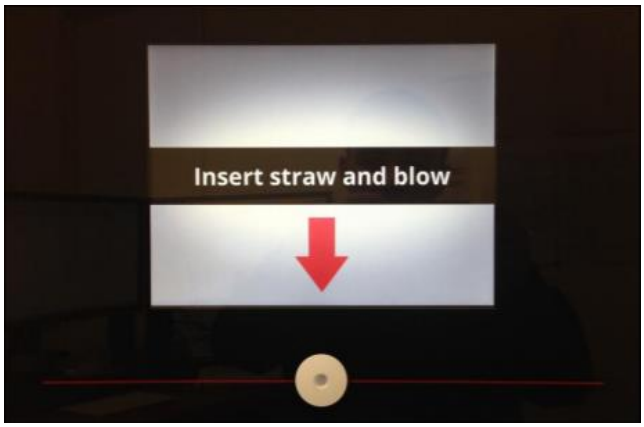

Figure 1: Wall Mount screen and sample port

The sample system in the Wall Mount 3 and Wall Mount 4 has a non-return valve flap to reduce the possibility of suck back by the donor, as shown in Figure 2 below. The non-return valve is in close proximity to where the straw creates contact with the inlet body, helping to keep the volume of saliva as low as possible. Then the sample system drains downwards with gravity reducing the possibility of moisture collecting or pooling in the sample port.

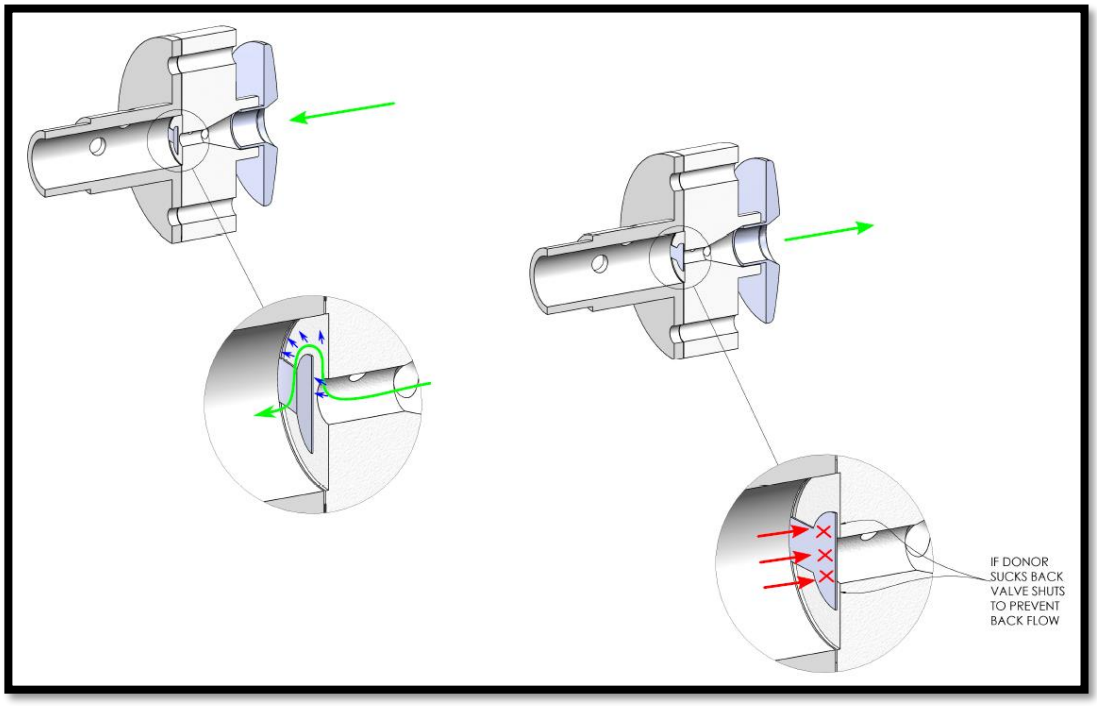

Figure 2: Wall Mount non- return valve mechanism

After the sample passes the inlet body and non-return valve, there is negligible resistance or back pressure. This "zone" is free flowing without restriction and drains any excess saliva away from donor. Regular daily surface cleaning of the Wall Mount is recommended per our latest Hygienic Cleaning Procedures which can be found at: https://www.alcolizer.com/faq/can-clean-alcolizer-instruments/

Note: The drain tube is inspected and replaced during annual service if excessive contamination is identified.

Mouthpiece Operation

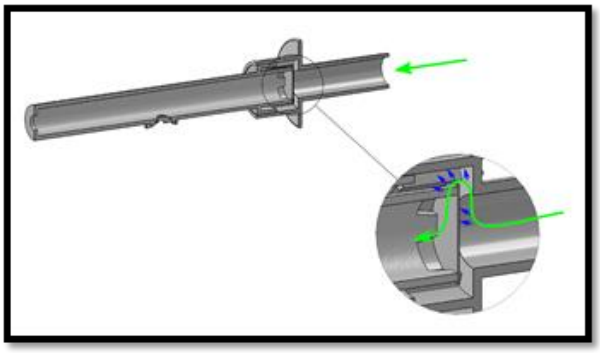

Figure 3

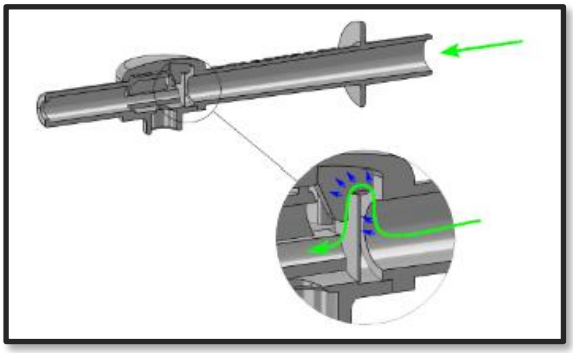

Figure 3a

Figure 3 & 3a: Spit Trap Non-Return Valve Mouth Piece Mechanism

Alcolizer Technology has developed a “Spit Trap, Non-Return Valve” mouthpiece that has a dual purpose. Firstly, this design will use centrifugal force to drive the saliva into a capture area, whilst still allowing the required flow rate of breath to pass through as shown in Figure 3 and 3a above.

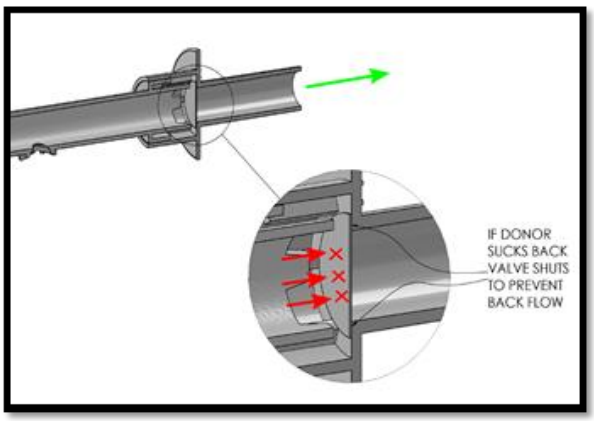

Figure 4

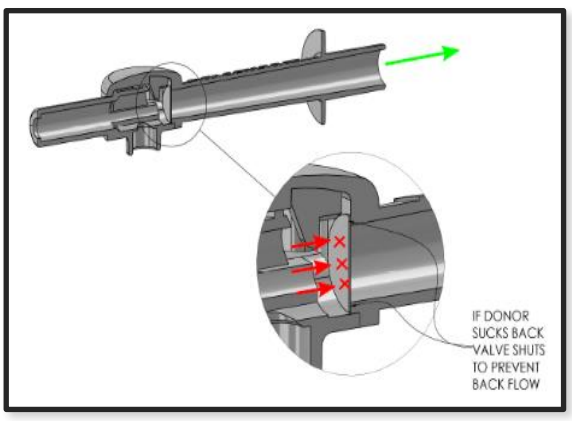

Figure 4a

Figure 4 & 4a: Non- Return Valve suck back feature

The second function is designed to prevent the donor interfering with the result if they “Suck back”. As demonstrated in Figure 4 and 4a above if the donor sucks back the Non-Return Valve will close and prevent the instrument from reading and stops any breath returning to the donor. For further information on the benefits of “Spit Trap Non-Return Valve” contact our Alcolizer Technology Sales team.

Passive Testing

Figure 5: Passive cup technology

For passive testing, we recommend to use an Anti-Blow-Back Passive Cup. Passive Testing is greatly enhanced by using cup like technology to funnel the donor's breath into the spigot, the downside is when using a standard or traditional cup the donor feels their breath blowing back into their face, which is not a pleasant user experience and we **don't** recommend it's use. To improve the user experience and hygiene, we have designed and patented a unique Passive Cup which re-directs and diffuses breath flow away from the donor and operator as shown in Figure 5. The anti-blow-back design still maintains the primary feature of a cup which is to make passive testing more efficient.