

### DISTRIBUTION REPEATABILITY 9 ML FROM A DILUENT BAG WITH FLEXIPUMP®

Unit: *FlexiPump® Pro* - N/S: 562000S00173 - Software version: 2.2

#### Aim

Evaluate the repeatability of a volume dispensed consecutively, after **FlexiPump®** calibration, from a 2-liter bag of diluent.

#### Materials and method

##### Protocole:

- Connect a bag of Buffered Peptone Oxoid Water (Oxoid) to a 3.2 mm Dispensing Set using a trocar.
- Insert the pump hoses of the dispensing assembly into the double pump head of the unit.
- Fill the pipes with the "Fill tubing" function.
- Setting up the distribution program:
  - "Doses" mode
  - 400 rpm rotation
  - 3.2 mm tubing diameter
  - Auto power
  - 9 mL volume
- Calibrate the program.
- Place a container on a scale. Tare and then dispense a dose. Note the mass of the dispensed diluent. Repeat the tare and then dispense a dose, again noting the mass of dispensed diluent.
- Repeat the operation 150 times.

#### Results

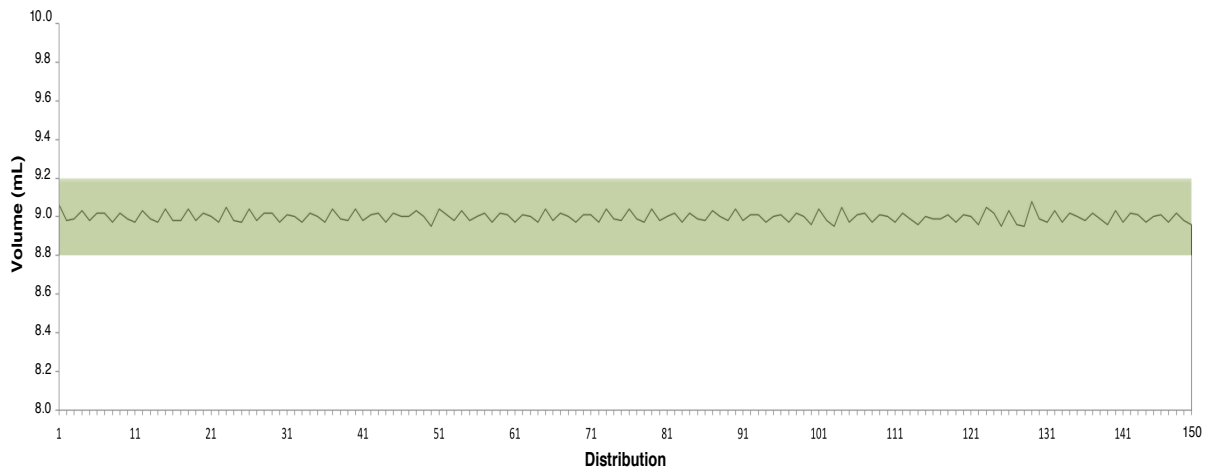
##### Calibration data:

- Calibration volume: 37.45 mL
- Doses accuracy: 1.12%

The obtained results are listed and represented on the following graph. On this graph, in addition to the result curve, is given the accepted error interval of  $\pm 0.2$  mL, in accordance with the ISO 6887-1 recommendations, in its section "Preparation of Decimal Dilutions"

Distribution	Volume (mL)	Distribution	Volume (mL)	Distribution	Volume (mL)
1	9.06	51	9.04	101	9.04
2	8.98	52	9.01	102	8.98
3	8.99	53	8.98	103	8.95
4	9.03	54	9.03	104	9.05
5	8.98	55	8.98	105	8.97
6	9.02	56	9.00	106	9.01
7	9.02	57	9.02	107	9.02
8	8.97	58	8.97	108	8.97
9	9.02	59	9.02	109	9.01
10	8.99	60	9.01	110	9.00
11	8.97	61	8.97	111	8.97
12	9.03	62	9.01	112	9.02
13	8.99	63	9.00	113	8.99
14	8.97	64	8.97	114	8.96
15	9.04	65	9.04	115	9.00
16	8.98	66	8.98	116	8.99
17	8.98	67	9.02	117	8.99
18	9.04	68	9.00	118	9.01
19	8.98	69	8.97	119	8.97
20	9.02	70	9.01	120	9.01
21	9.00	71	9.01	121	9.00
22	8.97	72	8.97	122	8.96
23	9.05	73	9.04	123	9.05
24	8.98	74	8.99	124	9.02
25	8.97	75	8.98	125	8.95
26	9.04	76	9.04	126	9.03
27	8.98	77	8.99	127	8.96
28	9.02	78	8.97	128	8.95
29	9.02	79	9.04	129	9.08
30	8.97	80	8.98	130	8.99
31	9.01	81	9.00	131	8.97
32	9.00	82	9.02	132	9.03
33	8.97	83	8.97	133	8.97
34	9.02	84	9.02	134	9.02
35	9.00	85	8.99	135	9.00
36	8.97	86	8.98	136	8.98
37	9.04	87	9.03	137	9.02
38	8.99	88	9.00	138	8.99
39	8.98	89	8.98	139	8.96
40	9.04	90	9.04	140	9.03
41	8.98	91	8.98	141	8.97
42	9.01	92	9.01	142	9.02
43	9.02	93	9.01	143	9.01
44	8.97	94	8.97	144	8.97
45	9.02	95	9.00	145	9.00
46	9.00	96	9.01	146	9.01
47	9.00	97	8.97	147	8.97
48	9.03	98	9.02	148	9.02
49	9.00	99	9.00	149	8.98
50	8.95	100	8.96	150	8.96

100 successive 9 mL distribution data from a 2 liter diluent bag



- Average distributions : 8.9989 mL
- Average difference: 0.01%
- Maximum difference: 0.88% (0.08 mL)
- Standard deviation of distributions: 0.0268 mL

### Conclusion:

Based on the obtained results in this test, we can conclude that the distribution of successive doses with **FlexiPump**<sup>®</sup> from a diluent bag shows excellent repeatability. We do not see any drift in the dispensed volume as the bag empties