

Contents		Page
Foreword		v
1	Scope	1
2	Normative references	1
3	Definitions	1
4	Test equipment	1
4.1	General	1
4.2	Measurement of vacuum	2
4.3	Measurement of a vacuum changing over time	2
4.4	Measurement of atmospheric pressure	2
4.5	Measurement of back pressure	2
4.6	Measurement of airflow	3
4.7	Measurement of pulsation characteristics	3
4.8	Measurement of pump rotational frequency	3
4.9	Teatcup plugs	3
5	Vacuum system	4
5.1	General requirements and preparation	4
5.2	Vacuum regulation	5
5.3	Vacuum pumps	8
5.4	Vacuum regulator leakage	10
5.5	Vacuum gauge error	11
5.6	Vacuum drop in air line	11
5.7	Effective volume of interceptor	11
5.8	Effective volume of the sanitary trap	12
5.9	Leakage in vacuum system	12
5.10	Vacuum drop across vacuum taps for bucket milking units	12
6	Pulsation system	13
6.1	Airflow at stall taps	13
6.2	Pulsation rate, pulsator ratio, pulsation chamber vacuum phases and vacuum drop in pulsator air line	13
7	Milk system	14
7.1	Slope of milkline	14
7.2	Milk system leakage	14
7.3	Effective volume of receiver	14
7.4	Leakage in releaser	15
8	Milking unit	15
8.1	Mouthpiece depth and effective length of liner	15
8.2	Teatcup or cluster fall-off air inlet	17
8.3	Leakage through shut-off valves of milking units	17
8.4	Air vent and leakage into teatcup or cluster	17
8.5	Effective volume of buckets, transport cans and recorder jars	17
8.6	Measuring the vacuum in the cluster	18
8.7	Measurement of the vacuum drop from accessories attached in the long milk tube	18
8.8	Airflow at the end of the long milk tube	18
Annex A (normative) Laboratory tests of vacuum in the milking unit		20
Annex B (informative) Alternative method for the measurement of air inlet and leakages in clusters		25
Annex C (informative) Examples of test procedure to reduce the test work		27