

### 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