

The Final Report On Two Brand Name Soda Limes Comparative Testing SPHERASORB (Intersurgical, Great Britain) And SOFNOLIME (Molecular Products, Great Britain).

The research was made in the Moscow Vishnevski Surgery Institute anaesthetic department (Russian Academy of Medical Science) on behalf of Moscow Scientific Anaesthetic Society.

The aim of study — to determine actual functioning duration of two Soda Limes. The duration was determined from the moment of Soda Lime 1kg filling up the absorber till 0,2% EtCO₂ recording on a capnograf. The inactivity time (periods between operations, week-ends) was set aside.

Testing conditions — the experiment was made with **1 kg** of Soda Lime with a fresh gas flow rate equal to 1 L/min in the patient circuit. The number of tests with each type of Soda Lime — **6 (six)**. The total tests number — **12 (twelve)**. The complete list of experiment conditions is indicated in Appendix 1. The study was held with the patients that had operations on account of blood vessels and abdomen internal. Groups in Appendix 2 indicate the demographic data.

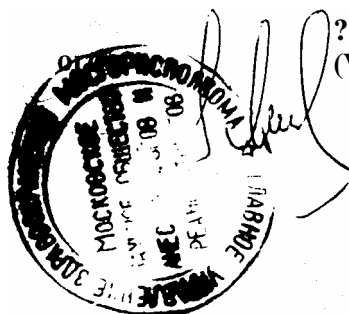
Number of test	Duration (min) ?? ??????? ?????????? 0,2% EtCO ₂	
	<i>Spherasorb</i>	Sofnolime
Test ? 1	22 hours 17 min = 1337 min.	16 hours 25 min = 985 min
Test ? 2	20 hours == 1200 min	13 hours 45 min == 825 min
Test ? 3	23 hours 30 min = 1410 min	14 hours 40 min = 880 min
Test ? 4	19 hours 05 min = 1145 min	12 hours 38 min = 758 min
Test ? 5	16 hours 40 min = 1000 min	10 hours 30 min = 630 min
Test ? 6	18 hours 35 min = 1115 min	15 hours 55 min = 955 min

Average duration min. (? +/- m)	1201,17 +/- 114,89min	838,83±101,17 min
Duration difference (hours, minutes)	362,33 ??? = 6 hours 04 minutes	
Duration difference (%)	30,17 %	

Conclusion: The Spherasorb 1 kg duration exceeds the Sofnolime 1 kg duration by 30,17% on average.

Additional experimental observation: The lower dust content level has been noticed in Spherasorb in comparison with Sofnolime, which is important for the reduction of dust ingress into patient lungs as well as for the extension of anaesthetic machines exploitation (with respect to irreversible valves, etc).

**Signature : The chairman of
Moscow Scientific Anaesthetic Society
Date : December 26th, 2000**



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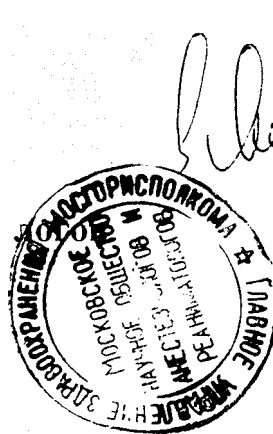
Appendix 1
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SOFNOLIME (Molecular Products, Great Britain)

Conditions of experiment on two Soda Limes duration comparative study

- 1) To use inspired CO₂ as the detection for Soda Lime exhaustion.
- 2) The type of OPERATIONS selected for the test must give preference to LONGER OPERATIONS so that the low flow maintenance makes up the majority of the usage time.
- 3) The FRESH GAS FLOW rates during the maintenance phase must be kept as CONSTANT as possible (e.g around 1 L/min) during the whole study.
- 4) Both Soda Lime's used in the same theatre .
- 5) Both Soda Lime's subjected to the same type of operation. This should be indicated in the test record sheet.
- 6) To make tests of both Soda Limes during ADULT OPERATIONS only.
- 7) To record the patient weights to enable a comparison of the spread of patient sizes used with the Soda Lime's. This should be indicated in the test record sheet.
- 8) All non-use periods should be excluded from the assessment of total duration. It means 1st day there is one operation for 4 hours, 2nd day there are two operations 5 hours both - in the testing data it should be as the Spherasorb or Sofnolime was tested two days for 14 hours period, but NOT 24 hours.
- 9) There should be a MINIMUM of 6 absorber tests for each Soda Lime.
- 10) The MINIMUM size absorber should be 1 litre.

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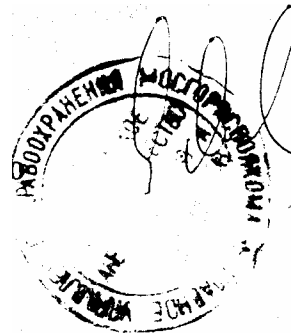
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Appendix 2
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SOFNOLIME (Molecular Products, Great Britain)

Patients Demographic Data By Groups

	Spherasorb			Sofnolime		
	Total Patients Number	Average age (years)	Average weight (kg)	Total Patients Number	Average age (years)	Average weight (kg)
Test ? 1	5	46,2	78,4	3	64	75
Test ? 2	10	57	63,8	3	54,3	76
Test ? 3	5	47,4	74	5	58,4	83
Test ? 4	7	46,6	70,6	5	54	77
Test ? 5	4	61,75	75	5	54,6	75,8
Test ? 6	6	62,7	83,5	4	47	60,25
Totals	37	53,6	74,21	25	55,3	74,50

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 (Valeri V.Lihvanzev)