

National Bureau of Standards

Certificate

Standard Reference Material 620

Soda-Lime Flat Glass

(In Cooperation with the American Society for Testing and Materials)

This Standard Reference Material is for use in checking chemical methods of analysis and for calibration in optical emission and x-ray spectrometric methods of analysis.

<u>Constituent</u>	<u>Percent, by weight</u>	<u>Uncertainty</u>
SiO ₂	72.08	0.08
Na ₂ O	14.39	0.06
CaO	7.11	0.05
MgO	3.69	0.05
Al ₂ O ₃	1.80	0.03
K ₂ O	0.41	0.03
SO ₃	0.28	0.02
As ₂ O ₃	0.056	0.003
Fe ₂ O ₃	0.043	0.004
TiO ₂	0.018	0.002

The certified values are the present best estimates of the "true" values based on the results of a cooperative analytical program. At NBS, fifteen statistically selected samples of the glass were extensively tested for homogeneity by S. D. Rasberry and C. K. Kim using x-ray fluorescence spectrometry. Based on their results the variations within and among samples are estimated to be less than the uncertainties given above.

The overall direction and coordination of the round-robin analysis leading to certification were performed by Paul Close, Chairman of ASTM Subcommittee C 14.02 on Chemical Analysis of Glass and Glass Products.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by G. W. Cleek and R. E. Michaelis.

Washington, D.C. 20234
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(Revision of Certificate
dated 5, 17, 72)

George A. Uriano, Chief
Office of Standard Reference Materials

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The material for this standard was prepared and furnished to NBS by American Saint Gobain Corporation (ASG), Jeannette Factory, Pennsylvania.

The following laboratories cooperated in the round-robin chemical analysis of this flat glass:

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