

National Bureau of Standards

Certificate

Standard Reference Material 621

Soda-Lime Container 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 calibrating optical emission and x-ray spectrometric methods of analysis.

Constituent	Percent by weight	Uncertainty
SiO ₂	71.13	0.03
Na ₂ O	12.74	0.05
CaO	10.71	0.05
Al ₂ O ₃	2.76	0.04
K ₂ O	2.01	0.03
MgO	0.27	0.03
SO ₃	0.13	0.02
BaO	0.12	0.05
Fe ₂ O ₃	0.040	0.003
As ₂ O ₃	0.030	0.001
TiO ₂	0.014	0.003
ZrO ₂	0.007	0.001

The certified values are the present best estimates of the "true" values based on the results of a cooperative analytical program. At NBS twelve statistically selected samples of the glass were tested for homogeneity by S.D. Rasberry and L. Zinger using x-ray fluorescence spectrometry. Based on their results the variations 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, C.L. Stanley, and R.E. Michaelis.

Washington, D.C. 20234
January 21, 1982
(Revision of certificate
dated 3/13/75.)

George A. Uriano, Chief
Office of Standard Reference Materials

(over)

The material for this SRM was prepared for NBS by Owens-Illinois, Inc., Technical Center, Toledo, Ohio. The following laboratories cooperated in the chemical analysis of this container glass:

T.B. Bodkin, Pennsylvania State University, University Park, Pennsylvania.

G.D. Bowling, Owens-Corning Fiberglass Corp., Technical Center, Granville, Ohio.

W.P. Close, Owens-Illinois, Inc., Technical Center, Toledo, Ohio.

H.S. Moser, Owens-Illinois, Inc., Vineland, New Jersey.

Y.S. Su, Corning Glass Works, Corning, New York.

L.E. Stadler, Emhart Corp., Hartford Division, Hartford, Connecticut.

E.J. Maienthal, Analytical Chemistry Division, National Bureau of Standards.