



## United States Department of Agriculture

Agricultural Marketing Service, Specialty Crops Program, Specialty Crops Inspection Division

### APPENDIX XVI – TEMPERATURE CORRECTIONS – REFRACTOMETERS WITHOUT AUTOMATIC TEMPERATURE CORRECTIONS

#### Introduction:

The Appendix XVI – Temperature Corrections for Refractometers Without Automatic Temperature Corrections is an appendix to the AIM Inspection Series, Technical Procedures Manual. It is designed for Specialty Crops Inspection (SCI) Division personnel of the U.S. Department of Agriculture (USDA). The purpose of this chart is to provide an efficient means for applying the temperature corrections required when using a refractometer without Automatic Temperature Corrections.

Temp. Degrees C.	Refractometer Degrees Brix										
	0	5	10	15	20	25	30	40	50	60	70
	Subtract from Refractometer Brix Reading										
10	.50	.54	.58	.61	.64	.66	.68	.72	.74	.76	.79
11	.46	.49	.53	.55	.58	.60	.62	.65	.67	.69	.71
12	.42	.45	.48	.50	.52	.54	.56	.58	.60	.61	.63
13	.37	.40	.42	.44	.46	.48	.49	.51	.53	.54	.55
14	.33	.35	.37	.39	.40	.41	.42	.44	.45	.46	.48
15	.27	.29	.31	.33	.34	.34	.35	.37	.38	.39	.40
16	.22	.24	.25	.26	.27	.28	.28	.30	.30	.31	.32
17	.17	.18	.19	.20	.21	.21	.21	.22	.23	.23	.24
18	.12	.13	.13	.14	.14	.14	.14	.15	.15	.16	.16
19	.06	.06	.06	.07	.07	.07	.07	.08	.08	.08	.08
Add to Refractometer Brix Reading											
21	.06	.07	.07	.07	.07	.08	.08	.08	.08	.08	.08
22	.13	.13	.14	.14	.15	.15	.15	.15	.16	.16	.16
23	.19	.20	.21	.22	.22	.23	.23	.23	.24	.24	.24
24	.26	.27	.28	.29	.30	.30	.31	.31	.31	.32	.32
25	.33	.35	.36	.37	.38	.38	.39	.40	.40	.40	.40
26	.40	.42	.43	.44	.45	.46	.47	.48	.48	.48	.48
27	.48	.50	.52	.53	.54	.55	.55	.56	.56	.56	.56
28	.56	.57	.60	.61	.62	.63	.63	.64	.64	.64	.64
29	.64	.66	.68	.69	.71	.72	.72	.73	.73	.73	.73
30	.72	.74	.77	.78	.79	.80	.80	.81	.81	.81	.81

Note: Above chart is only for instruments standardized at 20 degrees C.

**How To Use This Chart:**

1. Locate the column nearest to the degrees Brix reading from the refractometer (use rounding).
2. Locate the temperature row that matches the temperature of product.
3. Match up the above column and row to see your correction factor, while noting the need to add or subtract this from the reading shown on the refractometer.
4. Add or subtract this correction factor and write this number down on inspection documents.