**Table of Contents: Additional Supplemental Figures**

- **Supplemental Figure A:** Blind starch sample test card images .................................................. 2
- **Supplemental Figure 1B:** Blind urea sample test card images .................................................... 3
- **Supplemental Figure 2B:** Blind urea sample test card images .................................................... 4
- **Supplemental Figure C:** Blind glucose sample test card images .................................................. 5
- **Supplemental Figure D:** Blind sucrose sample test card images .................................................. 6
- **Supplemental Figure E:** Blind combo sample test card images .................................................... 7
Supplemental Figure A. Blinded starch samples developed with paper starch test spots. Sample ID included to the right of each image. First 11 samples were run in parallel to a negative control (plain 2% milk). A dark blue precipitate indicates a milk sample that tested positive for potato starch.
Supplemental Figure 1B. Blinded urea samples developed with urea spot tests. Sample ID included to the right of each test (samples 5 to 107). A negative control (plain 2% milk) and positive control (70 mg/dL urea spiked milk) were run in parallel with the sample. Blind sample color/intensity was compared to a positive control as described in experimental sections 2.6 through 2.8. Magenta color on the sample spot, greater than or equal to a positive control, is indicative of urea adulteration ≥ 70 mg/dL.
Supplemental Figure 2B. Blinded urea samples developed with urea spot tests. Sample ID included to the right of each test (samples 108 to 156). A negative control (plain 2% milk) and positive control (70 mg/dL urea spiked milk) were run in parallel with the sample. Blind sample color/intensity was compared to a positive control as described in experimental sections 2.6 through 2.8. Magenta color on the sample spot, greater than or equal to a positive control, is indicative of urea adulteration ≥ 70 mg/dL.
Supplemental Figure C. Blinded glucose samples developed with glucose spot tests. Sample ID included to the right of each test (samples 1 to 40). A negative control (plain 2% milk) and positive control (4 mM glucose spiked milk) were run in parallel with the sample. Blind sample color/intensity was compared to a positive control as described in experimental sections 2.6 through 2.8. Dark brown color on the sample spot, greater than or equal to a positive control, is indicative of glucose adulteration ≥ 4 mM.
Supplemental Figure D. Blinded sucrose samples developed with sucrose spot tests. Sample ID included to the right of each test (samples A to AN). A negative control (plain 2% milk) and positive control (4 mM sucrose spiked milk) were run in parallel with the sample. Blind sample color/intensity was compared to a positive control as described in experimental sections 2.6 through 2.8. Dark brown color on the sample spot, greater than or equal to a positive control, is indicative of sucrose adulteration ≥ 4 mM.
Supplemental Figure E. Blinded combo samples developed with combo spot tests (combination of glucose and sucrose test spots). Sample ID included to the right of each test (samples 1 to 40). A negative control (plain 2% milk) and positive controls (4 mM glucose spiked milk or [2 mM glucose + 2 mM sucrose]) were run in parallel with the sample. Blind sample color/intensity was compared to a positive control as described in experimental sections 2.6 through 2.8. Dark brown color on the glucose sample spot, greater than or equal to the glucose positive control, is indicative of glucose adulteration ≥ 4 mM. Dark brown color on the sucrose sample spot, greater than or equal to the [2 mM glucose + 2 mM sucrose] positive control, is indicative of glucose or sucrose ≥ 2 mM each. The mean intensities from the sucrose test and glucose test should be compared to determine sugar content. For example, sample 9 contains glucose and sucrose. The intensity from the sucrose spot is greater than the glucose only spot, indicating the presence of both sugars. The user could conclude that the sample contains glucose and sucrose in excess of 4 mM.