

Figure 1. Raw wastewater boxplots from turbidity, color, and TSS.
Figure 2, shows that the COD boxplot has the median line closer to the middle, meaning that the data distribution is symmetric or normal. The median line in the BOD boxplot is closer to the upper quartile, indicating that the data distribution is "negatively skewed." This suggests that low concentration values were more common in the BOD data than high concentration values. Similar, to the COD boxplot, the ammonia data distribution is symmetrical.


Figure 2. Raw wastewater boxplots (a) COD (b) BOD (c) ammonia.
The chromium and manganese datasets were more of negative skewness distribution as determined by the median lines in Figure 3; whereby, the medians can be observed to be closer to the upper quartile with a definition that the chromium and manganese data from raw wastewater constituted a higher frequency of low concentration values than the high concentration values. While the median line in the nickel boxplot is almost touching the lower quartile, this indicates that the water quality data has a larger frequency of high concentration values than low concentration values, a phenomenon known as "positive skewness.

