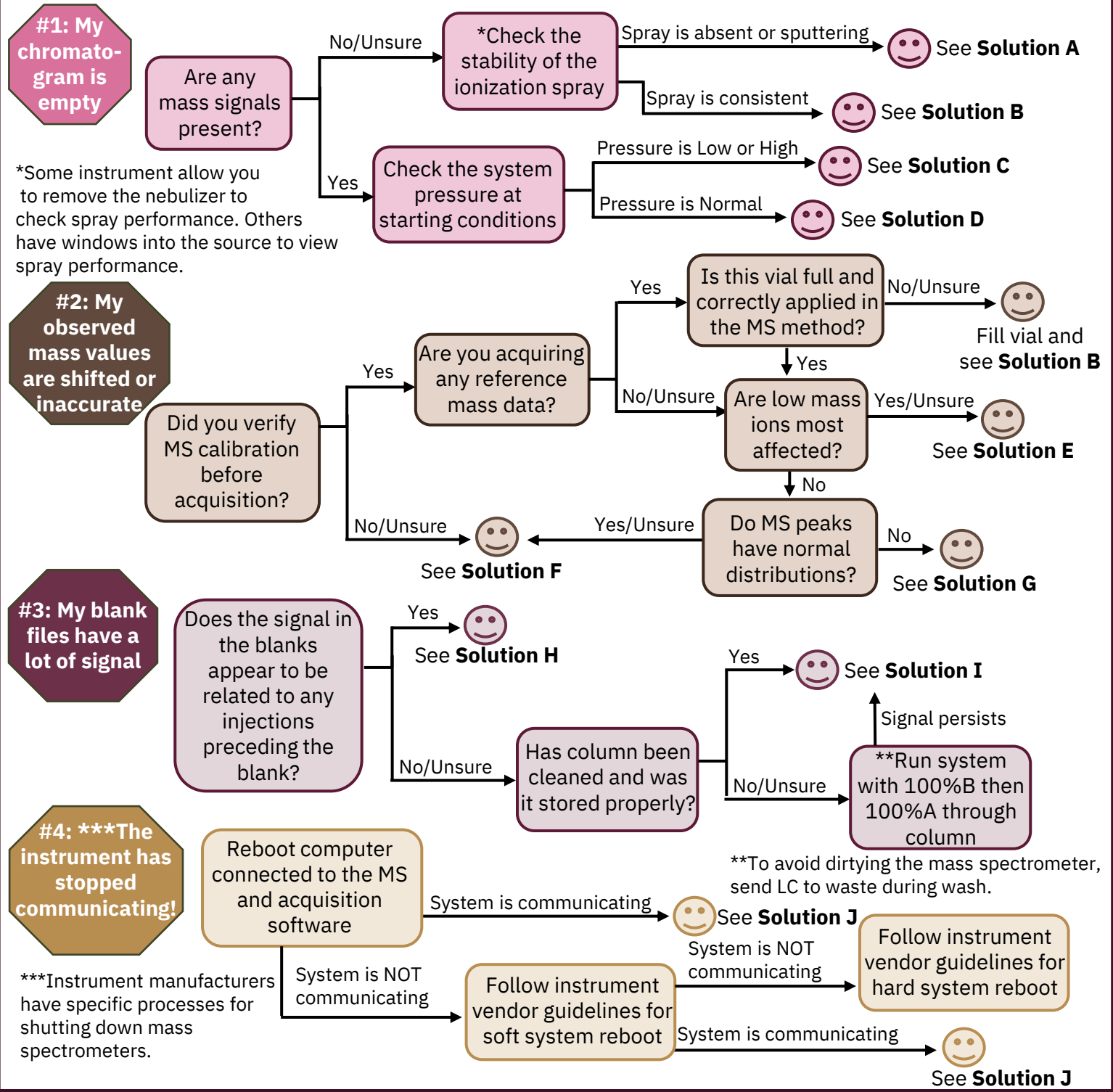
# MASS SPECTROMETER (MS) TROUBLESHOOTING

*Missing a solve for troubleshooting your instrument? Contact ptfionbaording@gmail.com*




## Solutions

**A – Inspect ESI capillary for clog and review source settings:** Irregular and/or absent spray can be caused by a clog. Follow instrument manufacturer instructions to check for clogs and adjust source settings to ensure consistent spray.

**B – Verify accuracy of MS method:** Ensure the MS method is properly encoded to acquire the desired data and required reagents are prepared.

**C – Examine LC-MS for leaks and/or clogs:** Investigate irregular pressure using an LC troubleshooting guide.

**D – Check system for contamination:** Move to issue #3: my blank files have a lot of signal.

**E – Perform check on detector voltage:** Follow instrument manufacturer instructions to perform detector voltage check.

**F – Re-calibrate mass spectrometer:** Follow instrument manufacturer instructions to calibrate instrument (see Note 1).

**G – Re-tune mass spectrometer:** A tune of mass spectrometer voltages can help ensure correct mass value assignments.

**H – Use stronger needle wash:** Needle washes that clean the autosampler between injections can help reduce carryover. Alternatively, consider running additional blanks between samples.

**I – Re-make mobile phases:** Follow the mobile phase making procedure outlined in Reverse Phase Metabolomics SOPs. Ensure all reagents are LC-MS grade, or equivalent.

**J – Reduce extra programs on MS computer:** Try to reduce activities not related to acquiring MS data to reduce reboot requirements (see Note 2).

## Notes

Note 1: Rebooting computer and/or mass spectrometer can help improve calibration application.

Note 2: It is recommended to recalibrate MS after every reboot and re-start data acquisitions.