**[lab name]**

**Allowed and Prohibited Manual Reintegration Procedures**

 **[#]**

**In Compliance with V1**

**VERSION #1.0 Effective date: January 1, 2024**

**APPROVED BY**

**Signature**

 **[name] Technical Manager**

**Signature**

 **[name] Quality Manager**

**New SOP**

**Revision History**

|  |  |
| --- | --- |
| Version number and effective date | Revisions made |
| V 1.0 January 1, 2024 | Conforms to TNI 2016 standards. |
|  |  |

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# Manual re-integration of chromatographic peaks.

All efforts have been made to assure that chromatographic software properly recognizes the starting and ending points of a chromatographic peak so that proper integration will happen. However, as columns age or the result of complex samples, chromatographic software does not always adequately recognize one or both points and either over or underestimates the peak area.

# Allowed modifications and recordkeeping.

When this is recognized by the analyst, they are authorized to change either or both endpoints to correct for the failure by the analytical software. When performing reintegration, the analyst is to do the following.

* Record the date when the correction was made.
* Record the changes made.
* Initial or otherwise mark who made the correction.
* Record the new area and new concentration.
* Retain the original chromatogram including the original calculations for area and concentration.

# Prohibited Manual Reintegration.

Although it is left to the judgement of the analyst whether to reintegrate a chromatographic peak, the following situations are prohibited from reintegration.

* A peak that is more than ½ outside of the retention time window.
* A peak associated with a calibration standard, Negative or Positive Control, or any Calibration Verification sample.
* A peak associated with a Performance Test sample.
* The reintegration of a Matrix spike sample when the original sample did not need reintegration and vis versa. Both must be reintegrated for the same reasons and the adjustment must be proportional.

In the above cases, the analyst is to halt analyses and conduct any indicated repair or maintenance, then redo the entire analytical batch.

# References

* *Management and Technical Requirements for Laboratories Performing Environmental Analyses*, The NELAC Institute (TNI), Rev 2.1, September 1, 2016

# Definitions and Acronyms

Words specific to this document or used outside of their dictionary definition are defined here. Acronyms can be defined in the text above on their first appearance.

## Definitions

## Acronyms

# Appendices