Testing Plan

# Testing Plan: mrgmisc 0.1.0

## Product Release Name or Number: mrgmisc 0.1.0

## Scope

The purpose of this Testing document is to outline the plan to test the Requirements outlined in the mrgmisc 0.1.0 Requirements Specification document. Automated Testing at the unit level and End to End will be conducted to ensure that all Requirements have been met. Test results will be documented in the Test Results document. All Test results will be time stamped and attested by the tester. As new information becomes available during development, requirements may be added, removed or modified. As a result, corresponding tests will be updated to reflect the appropriate requirements. However, at the time of Validation, all tests will reflect the functionality outlined in the final Requirements Specification document.

## Automated Testing

Testing in both development and validation phases proceeded using a standardized, automated unit testing framework via the testthat R package. Tests were written in testthat format and saved to R source files located within the package repository. Testing was executed using the testthat::test\_check function which ran all tests in every test file in the test directory. Each test was run in a clean R environment. The test\_check function returns a matrix of result data, with one line for each test and the corresponding result. The test matrix was retained and saved as an artifact from the validation testing. Tests relevant to the user stories covered by this change request were extracted from the larger test matrix to create the traceability matrix connecting the user story with the test result.

### Automated Tests

The table below outlines the automated tests that will be conducted:

| **Test ID** | **Test name** |
| --- | --- |
| MRG-ASNM-001 | read.nmctl expected performance |
| MRG-ASNM-002 | write.nmctl expected performance: Able to write out control files |
| MRG-AUCI-001 | AUC\_inf works as intended |
| MRG-AUCI-002 | AUC\_inf NA testing |
| MRG-AUCI-003 | AUC\_inf unexpected input testing: Correct output if all |
| MRG-AUCP-001 | auc\_partial works with simple AUC calculation |
| MRG-CHNK-001 | chunk expected output: Chunking |
| MRG-CHNK-002 | chunks unique groups as evenly as possible |
| MRG-CHNK-003 | chunk with groups: Chunks |
| MRG-CKDF-001 | chunk\_df expected output |
| MRG-CKDF-002 | chunk\_df unexpected input |
| MRG-CPNM-001 | capitalize\_names outputs expectation |
| MRG-IDPL-001 | ids\_per\_plot expected output |
| MRG-MMAX-001 | min\_through properly calculates values |
| MRG-MMAX-002 | max\_through properly calculates values |
| MRG-MMAX-003 | min\_through and max\_through |
| MRG-NASM-001 | Finds NA within dataframe |
| MRG-ORBI-001 | ordinal\_to\_binary\_ expected output |
| MRG-ORBI-002 | ordinal\_to\_binary\_ unique case |
| MRG-PADL-001 | pad\_left expected outcome |
| MRG-POOL-001 | pool creates appropriate groupings from two vectors with similarities |
| MRG-PRNS-001 | parens works as expected |
| MRG-PSMT-001 | posmat expected output |
| MRG-PSMT-002 | posmat error: Correct error occurs with non-square matrix |
| MRG-RDOT-001 | repalce\_dots replaces . with NA |
| MRG-RDOT-002 | replace\_dots unexpected input |
| MRG-RESM-001 | resample\_df properly recombines when it needs to make extra draws |
| MRG-RESM-002 | resample\_df expected output: Works with no |
| MRG-RESM-003 | resample\_df unexpected input |
| MRG-SBDF-001 | set\_bins\_df expected output |
| MRG-SBDF-002 | set\_bins\_df bounds argument |
| MRG-SBDF-003 | set\_bins\_df inclusive tests: inclusive = |
| MRG-SBDF-004 | set\_bins\_df between tests |
| MRG-SBDF-005 | set\_bins\_df quiet tests: quiet= |
| MRG-SBDF-006 | set\_bins\_df name and label tests |
| MRG-SNAP-001 | snap expected output |
| MRG-SPAC-001 | s\_pauc expected output |
| MRG-SQUN-001 | s\_quantiles expected output |
| MRG-SQUN-002 | s\_quantiles unexpected input: Appropriate error occurs |
| MRG-STBN-001 | set\_bins expected output |
| MRG-STBN-002 | set\_bins bound tests |
| MRG-STBN-003 | set\_bins inclusive tests: inclusive = |
| MRG-STBN-004 | set\_bins between tests |
| MRG-STBN-005 | set\_bins quiet tests: quiet= |
| MRG-WRNM-001 | write\_nonmem writes file to correct location |
| MRG-WRNM-002 | write\_nonmem special cases |

## Signature Page:

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