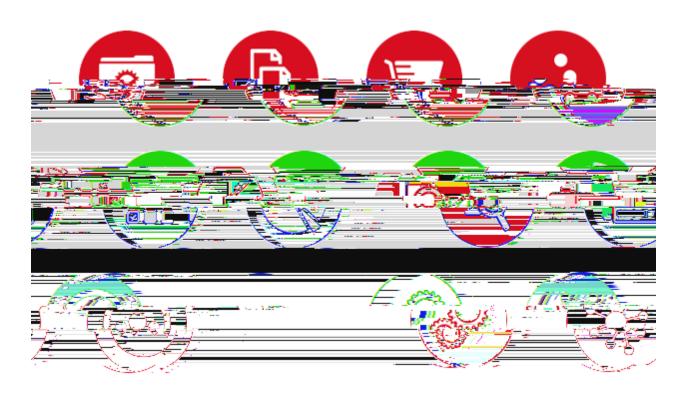


23.2 RELEASE NOTES

FOR RESEARCH MATERIAL MANAGEMENT

15 DECEMBER 2023



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RMM BIOREAGENTS FEATURE EXTENSIONS

RMM 23.2 continues the evolution of RMM BIOREAGENTS, JAGGAER's novel and comprehensive add-on capability for selecting, acquiring, storing, and using commercial bioreagents to improve research results and save time and cost.

RMM 23.2 introduces **Aliquoting** for bioreagent containers, integrated with storage boxes. This feature enables aliquoting and storage of bioreagent vials from sources.

This section details the new enhancements introduced in RMM 23.2 for RMM Bioreagents.

NOTE: THE RMM BIOREAGENTS FUNCTIONALITY DESCRIBED THROUGHOUT THIS SECTION REQUIRES A SUBSCRIPTION. PLEASE CONTACT RMM SUPPORT FOR INFORMATION ON ENABLING BIOREAGENTS.

ALIQUOT FOR BIOREAGENT CONTAINERS

CUSTOMER IMPACT

Feature Activation: This feature is Off by default.

New Permissions related to this Feature: Container Aliquot

New Notifications related to this Feature: None

USER IMPACT

This feature is intended for use by: Researchers and Administrators

Accessed Via: RMM |

This next Create Aliquots page displays the

The final page provides the researcher with a summary of the aliquot process which just occurred, displaying:

Source Bar Code

Remaining Source Container Amount

Bar codes of created destination containers

Selecting the button returns the researcher to the Container Search Results page.

Selecting the button copies the target bar codes to the researcher's clipboard for use in subsequent searches or operations.

Note on the Creation of Child Containers

BIOREAGENTS MATERIAL ATTRIBUTES

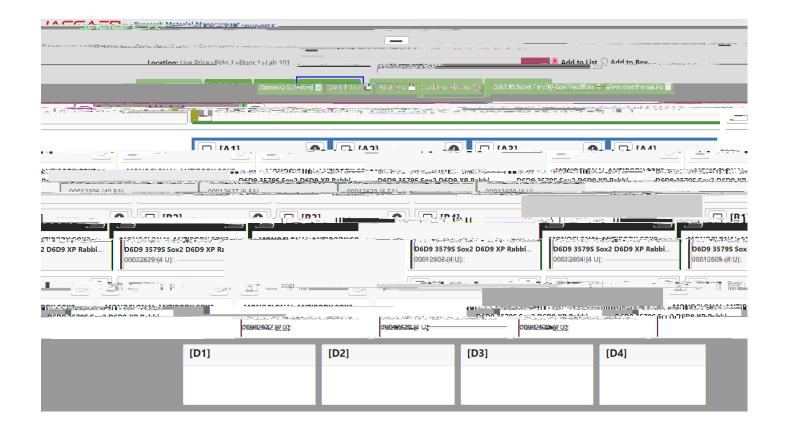
In previous releases, the CiteAb

The Bioreagent Attributes section of the Edit Material page displays all the possible attributes for a given bioreagent type

RMM will open a new browser tab to display the Box History (shown below).

The Box History will display:

Bar Code



Box Position History Report

Selecti	ng the
of the b	oox.

button generates a CSV report (shown below) detailing the history of the contents

The Box Position History report fields are:

Field Description

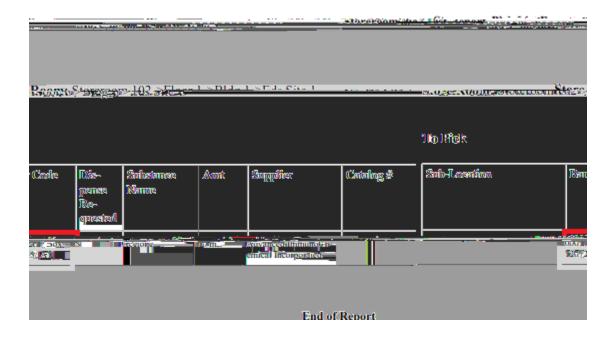
Position

Cont.12DCQQ EMC q148F12 CID 7q1482 335.69 436.03 13.92 reWnBT/F12 9 Tf1 0 021 190.1 3

STOREROOM FULFILLMENT - PICK LIST REPORT

The storeroom fulfillment pick list report has been enhanced to include the box and position in which the container is located.

In the example below the bar code column shows that vial 00011417 is in box 120723 position A1



CONTAINER DISPENSE LINEAGE

The new Container Dispense Lineage page provides a view of the lineage between Parent-Child containers as created via the new Aliquot operation, as well as the previously existing Storeroom Dispense functionality.

The Container Dispense Lineage page is accessed from the Container Search Results page, via a drop-down line-item menu option (shown below).

The new Container Lineage Page is shown below.

С

Container Lineage Result Set Information

The grid section of the Container Lineage page is shown below.



The detail section of the Container Lineage page provides the following:



Available for each container listed in the result set, clicking the button next to a container [C], refreshes the Display Lineage page, with the "Viewing From Container" being set to the container [C] and by default showing Direct Ancestors and Children for the container [C]

Bar Code

Generation - number of the generation in which the container was created

Parent Container - direct parent of the container

Dispensed Date

Status

Location

Box

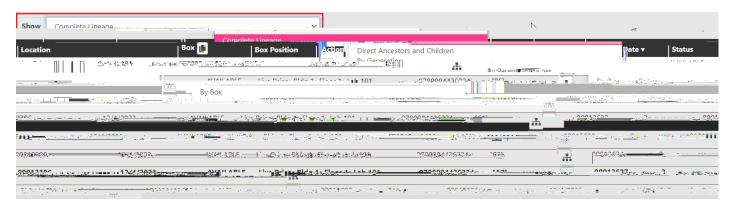
Box Position

Lot#

The container for whom container lineage is displayed, remains highlighted within in the result set, independent of how the researcher may sort the Container Lineage data.

Container Lineage Filtering

Highlighted below, the Container Lineage page provides researchers with the ability to filter the container results by various options to better see only those containers in which they are primarily interested.



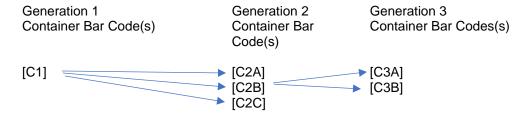
A researcher can filter the displayed information by the following.

Complete Lineage (default)	Complete lineage beginning at the original source container
Direct Ancestors and Children	Direct ancestors going back to the original source container and
	Containers created directly from the container
By Generation	All containers created in the generation
By Parent Container	Allows user to pick a parent container. After the parent container is picked, all containers created directly from the selected parent container are displayed.
By Dispense Date	Date on which the containers were dispensed
Ву Вох	Allows to filter by the box in which vials are located. This filter will only be visible if there is at least one container in the lineage that is in a box.

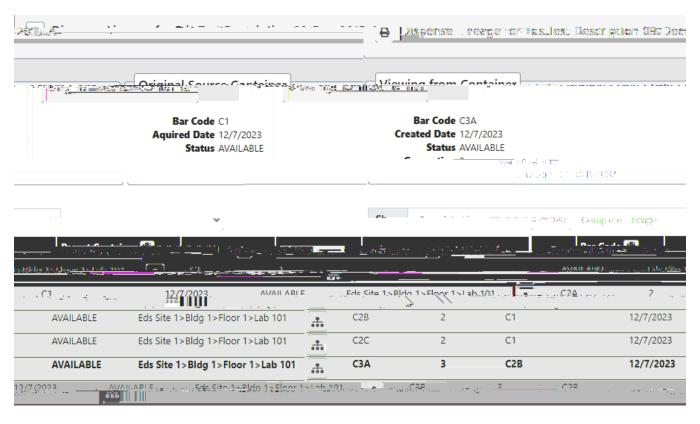
See example below for an illustration of "Complete Lineage", "Direct Ancestors and Children, and "By Generation" filters.

Example

The following illustrates the functionality of the Dispense Lineage page. Assume [C1] aliquots into [C2A], [C2B]. and [C2C], and then [C2B] aliquots into [C3A] and [C3B]



If the user performed a source search for [C3A] and viewed Container Dispense Lineage, the Dispense Lineage page would be as follows with row containing [C3A] being highlighted.



ENHANCED COMPLIANCE DATA

RMM 23.2 features an update in RMM's compliance data model to support **GHS version 9**. Key changes associated with this update include:

New Hazard classifications for "Chemicals Under Pressure", "Desensitized Explosives", "Aspiration Hazard", and "Hazard to the Ozone Layer"

Refinement of Acute Toxicity hazard ratings to differentiate Oral, Dermal, and/or Inhalation toxicity, so that one material can also be classified with multiple Acute Toxicity ratings

Refinement of Sensitization hazard ratings to differentiate skin and respiratory sensitization, so that one material can also be classified with multiple sensitization ratings

Differentiation of Acute and Chronic Aquatic Environment hazards

Chemwatch integrations are being correspondingly updated to reflect these changes.

The table below details how GHS hazards for materials will be remapped to new categories and values.

Aquatic Hazard Chronic 1	Aquatic Hazard Chronic Category 1
Aquatic Hazard Acute 1	Aquatic Hazard Acute Category 1
Aquatic Hazard Chronic 2	Aquatic Hazard Chronic Category 2
Aquatic Hazard Yes	Aquatic Hazard Acute Yes
Aquatic Hazard Acute 2	Aquatic Hazard Acute Category 2
Aquatic Hazard Chronic 3	Aquatic Hazard Chronic Category 3
Aquatic Hazard Acute 3	Aquatic Hazard Acute Category 3
Aquatic Hazard Chronic 4	Aquatic Hazard Chronic Category 4

Stock Master Analytics Page - Details

The following table details the available parameters for configuring Stock Master analytics. All the fields are required and must be provided.

Field	Description
On/Off switch	Determines whether analytics data will be displayed.
On Off	Default value is 'Off'. If set to 'Off', neither the 'Fast Moving' items widget on the home page nor the 'View Analytics' button on Stockroom Inventory Search will be visible.
	If this is set to on, the Stockroom Inventory Analytics Job must also be configured to run to gather the statics. See the Stockroom Inventory Analytics Job section for more information.
	Analytic data on the Stockroom Inventory Analytics page will only be displayed after the initial run of the Analytics job.
Period Type Monthly Quarterly	Stockroom analytic data can be calculated based on either monthly or quarterly data input.
	Default value is 'Monthly'
Threshold for Percent Above Average	Percent above average that the projected demand must be above to be defined as a 'Fast Moving I tem'.
	Must be between 0 - 999.
	Example:
	If the average demand is 100, and projected demand is 115, the projected demand is 15 percent above average.
	If the 'Threshold for Percent Above Average' value is set to less than 15, the item will be included in the 'Fast Moving I tems' widget and have a badge on the item's Stockroom Inventory Analytics page (both described later in the Release Notes).
Lookback Number of Periods	The number of months or quarters of past data should be used to calculate historical demand data.
	The current month or quarter is not included in this value.
	Must be between 1 - 99.
Failed Delivery Period	Number of calendar days [N] used to calculate stockroom replenishment items not received, or received more than [N] days after placing the request.
	Must be between 1 - 99.

The export contains the following fields:

Field Name

Description

Good Deliveries	Number of replenishments received within N days in the last 365 days, with N being the specified failed delivery period.
Failed Deliveries	Number or replenishments not received or received after more than N days in the last 365 days, with N being the specified failed delivery period.
Average Lead Time (Days)	Average Lead Time for Good Deliveries (Lead Time = Time between submit date and first partial or first full receipt action)

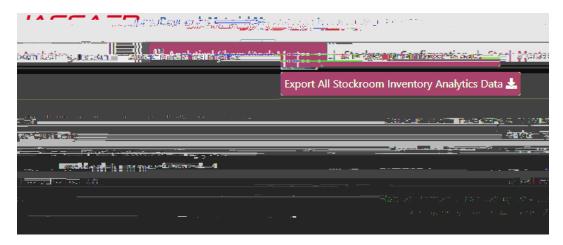
Standard Deviation of Lead Time

Current Period (Days)	Number of days into the current period (current quarter or current month).
	Example: 25 days
Current Period (%)	Percent of days into the current period (current quarter or current month). Example: 25 days into the current quarter Current Period % = 27.3%
Last Updated Date	Last Date/Time that the stockroom inventory analytics job ran for the item.

Update / View Configuration Properties

Users with the new **Stockroom Module Inventory Analytics Configuration** permission can update the configuration parameters by selecting the button.

Users that have the Stockroom Module Inventory Analytics permission, but do not have the Stockroom Module Inventory Analytics Configuration permission can view, but not modify, the Stockroom Analytics configuration parameter (shown below).



Notes on this page

Stock Masters

The job will calculate analytics data for all stock masters listed in the "Stockroom Analytics will be calculated for the following Stock Masters" section.

The job will **not** calculate analytics data for the stock masters listed in the "Stockroom Analytics WILL NOT BE calculated for the following Stock Masters" section.

To have stockroom analytic data calculated for a given stock master, go to the Stock Master Analytics page and set the Stock Master Inventory Analytics switch to on.

The job will run once a day at the time specified in the "Run Every Day at" drop down. The user may also run the job manually at any time to immediately update the Stockroom Analytics data by clicking the "Run Job Now" button, allowing users to update the data without waiting for the scheduled job to run.

Turning the job OFF will NOT hide the Stockroom Inventory Analytics page and on the Fast Moving Items home page widget. It will only stop calculating analytical data.

FAST MOVING STOCKROOM INVENTORY

The new, intelligent Stockroom Inventory Analytics Home Page widget (shown below) enhances the ability to identify and respond to **Fast Moving Items**. Items listed link to a new item detail page showing item demand and inventory trends and recommended stocking adjustments, with the opportunity to adjust stocking parameters or initiate a one-time replenishment request. This widget will only be visible

Stockroom Inventory Analytics Home Page Widget - Details

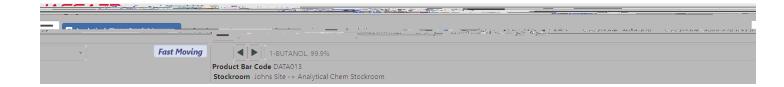
The following table details the elements of the Stockroom Inventory Analytics Home Page Widget.

Field	Description
Widget Title	Stockroom Inventory - Fast Moving Items Demand (Top 10/X).
	'X' is the total number of fast moving items.
Widget Subtitle	Items with Demand above Y% for Current {Month/Quarter}.
	'Y' is the 'Threshold for Percent Above Average' set on the Stock Master Inventory Analytics page.
	The Period Type selected on the Stock Master Inventory Analysis page (Monthly / Quarterly) is displayed here.
Widget Result Set Columns	The following information is displayed for each Stockroom Inventory Item in the result set:
	% Demand Above Avg
	Stock Master Item Name

Each row in the result set is a clickable hyperlink to open the Fast Moving Stockroom Inventory – Graphics and Actions page for the selected item (detailed below)

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The Stockroom Inventory Analytic and the Stockroom Inventory S	cs page can be accessed from Stockroor earch page for users with the new	m Inventory Analytics Home Page Widget
JAGGAER	40	www.JAGGAER.com



The Header section contains:

Stock Master Item Name

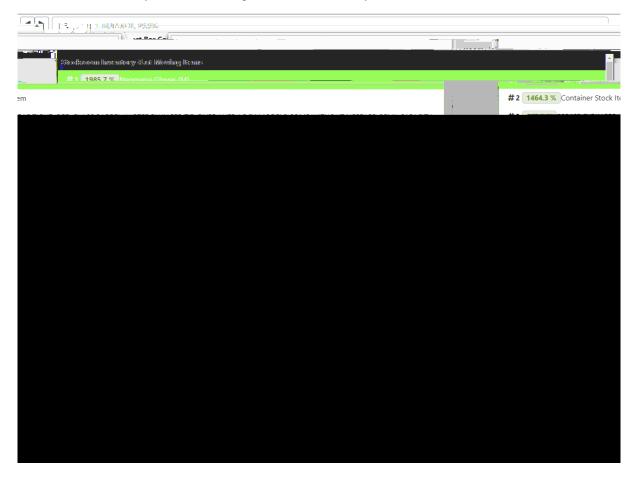
Product Bar Code

Stockroom Name

'Fast Moving' item badge

Selecting either the or icon moves the user forward or backward, respectively, through the list of fast moving items.

The Stock Master Item Name field is a dropdown listing of all the fast moving items for the stockroom. Selecting the dropdown displays all the fast moving items. A 'type ahead' search box is provided so users can easily find fast moving stockroom inventory items in the list.



The dropdown list shows:

Stockroom Inventory Fast Moving Items (the top 10 fastest moving stockroom inventory items)

Additional Fast Movers (all other stockroom inventory items where the Percent Demand Above Average is greater than the Threshold Percent Above Average from the Stock Master Analysis configuration). In the

'Additional Fast Movers' section, a icon indicates that this item has been hidden from the top 10 fast moving items. Details on hidden items are given in subsequent sections.

Selecting a Stockroom Inventory Item from the list will display the information, details, and analytics for the item.

HEADER INFORMATION (ACCESSED FROM STOCKROOM INVENTORY SEARCH)

The Header section of the Stockroom Inventory Analytics page, when accessed from the Stockroom Inventory Search page is shown below.

The right-hand side of	the Details section of the Sto	ockroom Inventory Analy	∕tics page has two data pa	nels (shown
JAGGAER		43	www.JAGG	

The lower panel shows replenishment data for the selected item (see definitions in the table describing the analytics export):

Average Order Size

Average Lead Time Days

Average Daily Demand

Replenishment Frequency Days

Note: The above data points represent the last 365 days.

DETAILS TAB UPDATES

The lefthand side of the Details section of the Stockroom Inventory Analytics page is shown below.

For the selected item, the left-side panel shows:

Current EOQ

Suggested EOQ

Suggested EOQ = (Replenishment Frequency + Average Lead Time) * Average Daily Demand

Current Reorder Point (ROP)

Suggested ROP

Suggested ROP = Average Order Size + (Average Lead Time * Average Daily Demand)

Selecting the

button replaces the current EOQ and Reorder Point

DETAILS TAB ACTIONS

The Details tab of the Stockroom Inventory Analytics page is shown below, highlighting the two actions available to users from this page.

ACTION SUGGESTED RESTOCK OF ITEMS

The suggest restock button displays the suggested restock quantity based on the stockroom analytic data. In the following example the suggested restock quantity is 315.

Restock button

Clicking on the Suggested Restock button takes the user to the restock page with restock quantity populated with the suggested restock quantity – as shown below. From there the user can click the Request button to create a restock request. Note that the user can also change the restock quantity, or not perform a res

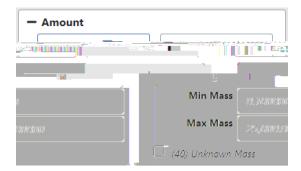
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ANALYTICS TAB

Detail enitodimation on this page includes information found on the Detail tab as well as the following (for definitions of the following, please see the table describing the analytics export):

% Demand/(Below) Average

Average # Units Requested Per Period*
Units Requested This Period*
Projected Demand Units In Next



Mass, indicated by the button, is the default option. To filter by a Volume amount, the researcher selects the button. After providing the amount value(s) criteria, the researcher can either apply the filter selection or cancel.

Note on Unknown Amounts

If a given item cannot be converted to a normalized amount, it will be flagged as "Unknown" (as shown in the above example) and will not be included in the filtered results.

The user may see the items that cannot be converted, by filtering based on the "Unknown value".

Sorting by Normalized Amount

In addition to filtering by normalized amount, the results can now be sorted by normalized amount, when in previous releases the user could only sort by package string.

FILTERING

Significant improvements have been made to source search filtering (shown below), including the following:

Immediate filtering on single select items
Improvements to selection of multiple Items
Ability to show/hide filters

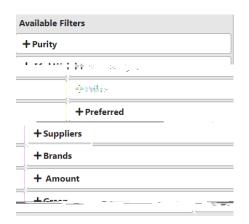
Ability to collapse filters

Immediate Filtering on Single Select Items

When a researcher now selects a single filter criterion, the Source Search results are

FILTER LIST BEFORE FILTERING

FILTER LIST AFTER FILTERING



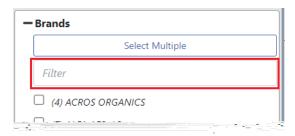


Once a filter has been applied, researchers can select the filter's icon to clear that particular filter. Researchers still have the ability to select 'Clear All Filters' (shown below) to remove all filtering.



Filter List

When an Available Filter for brands and supplies have more than 15 values (shown below), researchers can begin typing into the Filter field provided above the list of values to quickly select criteria.



As with other filters, if the researcher uses the Filter List to find their criteria, selecting the criteria will immediately filter the Source Search results.

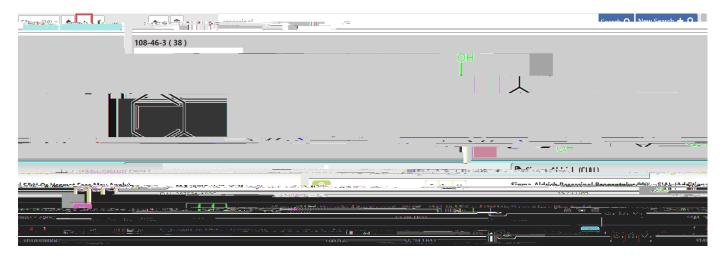
When there are multiple values of interest, researchers can opt for 'Select Multiple' and then use the Filter List to build a list of values for filtering. Once the filter is applied, researchers can clearly see each of the criterion from the Filter List (shown below).



Once the filter has been applied to the Source Search results, researchers can immediately update the Source Search results by de-selecting any of the values in the Filter List.



Shown below is the Source Search results page with the Filter List hidden, providing researchers with more real estate to review their search results.



Collapse Filters

Selecting the new Collapse Filters icon (also shown below in the Filter Bar area) – returns all open Available Filter options to the initial, closed, state.

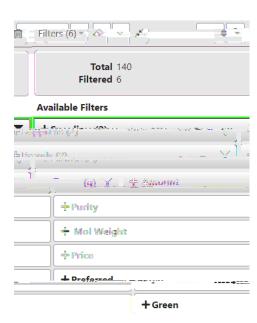


Once selected, the Collapse Filters option returns the Filter List to a state shown below.

FILTER LIST OPEN

FILTER LIST - COLLAPSED





The researcher can still see which filters are active as indicated by the icon and can select the icon to view the filter values being applied to the Source Search results.

CONTAINER SEARCH ENHANCEMENTS

As in previous releases the user sets their preferred locations via the user preference menu:
For DMM uporg with no cological Preferred Search Logations, the Logations panel will appear with the 'No Preferred
For RMM users with no selected Preferred Search Locations, the Locations panel will appear with the 'No Preferred Labs or Storerooms set.' message as shown below.
Quick Search For "My Containers"
As in previous releases, users can search containers by specifying an owner. To hm0r0912 0 612 792 reW* nBT/F1 9.96 Tf1 0

The following shows each panel (except Location panels which was shown previously) in its expanded state.

General Panel



Owners Panel



Materials Panel



Dates Panel

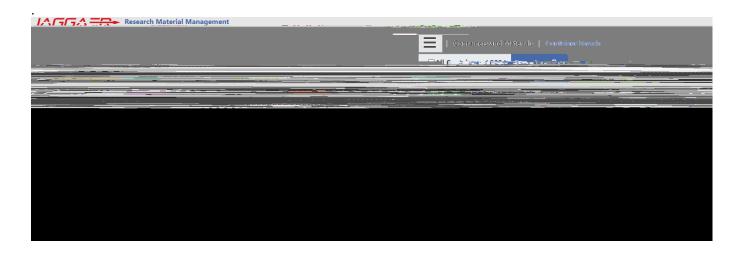


Project/PI Panel

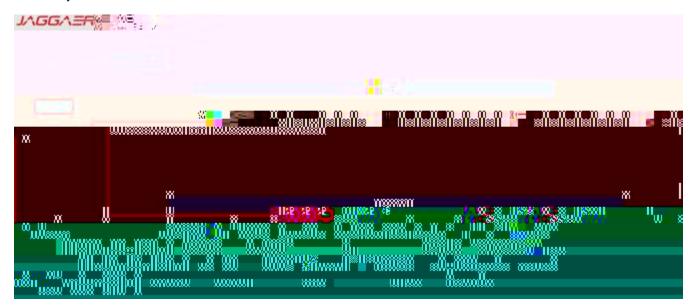


Container Search - Paste, Scan and Search By Boxes tabs

When a container search is executed from the Container Search – Paste, Scan or Search by Boxes tabs, the search results page will appear as shown below. The Paste, Scan and Search by Boxes tabs (highlighted below) are available to allow the user to continue add containers to their result set.



Selecting either the Paste, Scan or Search by Boxes tabs opens the data entry screen for each, while still displaying the result set. Selecting a tab a second time closes the data entry screen and displays just the result set – while keeping the tabs available for additional input. Shown below is the paste data entry screen:

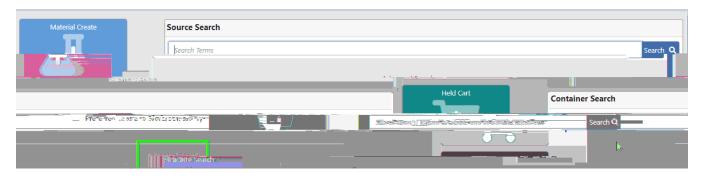


Additional containers retrieved by any of these methods will APPEND to the result set.

New Search Q button clears the search results and returns the user to the Paste tab.

ACCESSING ADVANCED SEARCH FROM HOME PAGE

The user may now access the Container Advanced Search directly from the Home Page by clicking on the new "Advanced Search" hyper link as pictured below.

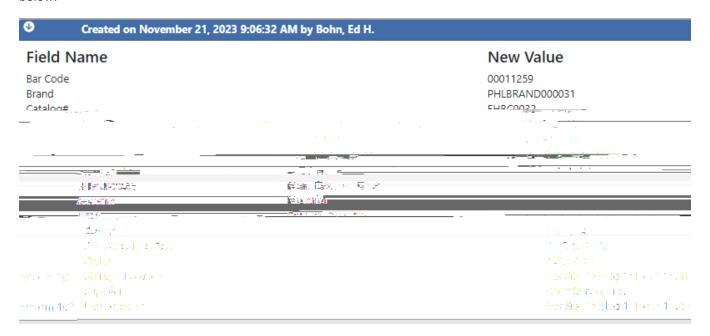


STOCKROOM

Fields Added to Container History	Notes
Open Date	
Original Amount	
Original Amount Units	
Original Radioactive Activity	
Original Radioactive Activity Date	
Original Standardized Amount	
Purity	
Site Acquired Date	
Storage Type	
Supplier	
Tare Weight	

Create Event History

Previously the "Create" container history event only showed the create date and the person who created the container. In this release, the "Create" event will show all the container attributes that have been set – as pictured below.



Upgrade Note

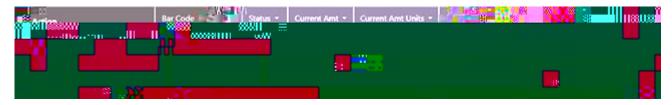
The upgrade process will generate an "Upgrade" event for all containers that 1) are not disposed or 2) have been disposed in the past six months at the time of the upgrade. A sample of the event is shown as follows:



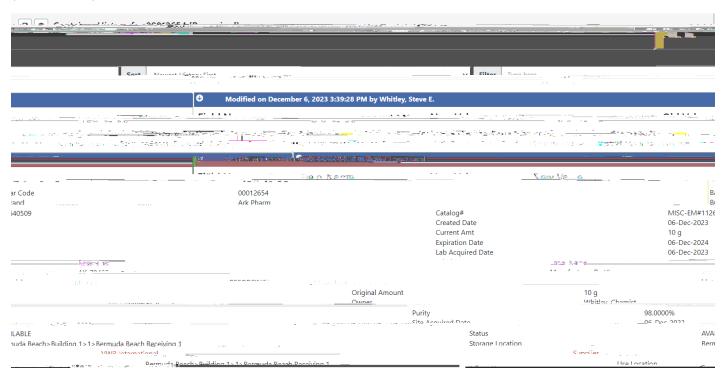
View History

Previously, container history was viewed in a panel within the View Container page. The display of container history has been enhanced to make the display of container history consistent with how history is displayed throughout RMM.

Shown below, the Container Search page enables a researcher to view the details of the container (View Container – is in previous releases) or to view the history of the container (Container History - new).



Selecting Container History from the dropdown menu will open a new browser tab displaying the container's history (shown below).



From the Container History page, users can print the container history by selecting the icon. Selecting the icon replaces the Container History with the Container View page.

A user on the Container View page (shown below) can select the

CONTAINER OPERATIONS

Change Container Bar Code

CUSTOMER IMPACT

Feature Activation: This feature is **On** by default.

New Permissions related to this Feature: Container Bar Code Change

New Notifications related to this Feature: None

USER IMPACT

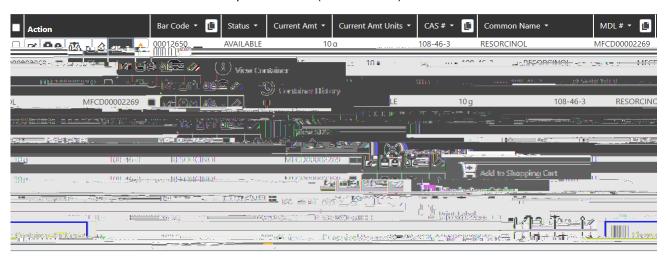
This feature is intended for use by: Researchers and Administrators

Accessed Via: RMM | Containers and Materials | Container Search

Container bar codes labels can fade over time and become unreadable. Bar code labels can fall off their containers. For RMM users employing pre-printed bar codes, the process for replacing a container's bar code label often required the creation of a new container.

Users with the new Container Bar Code Change permission can change the bar code for an existing RMM container, simplifying container administration and, importantly, maintaining a link between the container's old bar code and the newly assigned bar code in container history.

To change the bar code associated with a container, the user selects 'Change Container Bar Code' from the Container Search result set line-item dropdown menu (shown below).



On the Change Container Bar Code pop-up (shown below), the user provides the new bar code to be assigned to the container.

Field	Description
Header text color	The color of the message board text

Message Body

Single text block form allows user to enter markdown or in-

MERGE MATERIAL PROCESSING CHANGES

CUSTOMER IMPACT

Feature Activation: This feature is **On** by default.

New Permissions related to this Feature: **None**New Notifications related to this Feature: **None**

USER IMPACT

This feature is intended for use by: Researchers and Administrators

Accessed Via: RMM | Containers and Materials | Material Search

The RMM Merge Material process provides users with the ability to combine redundant RMM materials into a single RMM material. The user selects the 'source' material, which is merged into the 'destination' material. After the merge, the 'source' material no longer exists, and all containers and requests associated with the 'source' material are associated with the 'destination' material.

In previous releases:

The only attribute copied from the 'source' material to the 'destination' material was the Common Name. No other attributes associated with the 'source' material were merged.

Users were prevented from merging materials that were linked to a third-party integration, such as 3E, Chemwatch, or Sigma

In this release

All material identifiers will be attempted to be copied from the 'source' to 'destination'. See table below detailing when identifiers are copied.

For RMM 23.2, RMM will allow the material merge to occur regardless of third-party material integrations.

Please Please.Please se (30 G[)]TJETay(3)-9(E)]TJETQq090.0241i96T - (se)-71 9.92 Tp 29.77m0 dT/F1 9.96Tf1 0

The following table details the material data that will be copied from the source material into the destination material.

Source Synonym Type	Copied to Destination	Copied As Type
Alias	Always	Alias
Beilstein #	Always	Alias

CAS If the destination material does not have a CAS CAS or a Secondary CAS

ROLES

CUSTOMER IMPACT

Feature Activation: This feature is **On** by default.

New Permissions related to this Feature: **None**New Notifications related to this Feature: **None**

USER IMPACT

This feature is intended for use by: Administrators

Changes to Existing Templates

The following lists changes to existing templates.

Template	Description
Containers Create	Renamed "Manufacturer" column header to "Brand" Removed Box Bar Code and Position columns. To load containers

WEB SERVICES

The following enhancements have been made to Web Services. Please read the RMM 23.2.0 Web Services document for full details.

Create Project Web Service - creatorName has now been added to the Create Project web service

Create Person – userProfile has been added to the Create Person web service

INFRASTRUCTURE NOTES

ANDROID SCANNER (MOBILE COMPUTER) LOGGING

Any logging events generated from Android Scanners (Mobile Computers), that previously went to the ERDServices.log file, will now go to the new ErdMobile.log file, which is dedicated to Android Scanner events.

SIEM LOGGING

In the previous release, JAGGAER introduced a new corporate standard for Security Information and Event Management (SIEM) logging of system access attempts and system modifications related to access. Our goal is to capture security-related events for the purposes of real-time and forensic analysis by both JAGGAER and third parties.

The RMM 23.2 release adds additional logging to further enhance security of JAGGAER applications.

CLIENT REPORTED ISSUES ADDRESSED

Following is the