

Codonics SLS Administration Tool Workflow Improvements

Technical Brief

Overview

Version 1.9.0 or newer software for Codonics Safe Label System (SLS) Administration Tool (AT) includes workflow improvements for updating formularies. These new enhancements include:

- ◆ Reporting drug Verifications that occurred on SLS Point of Care Stations (PCS) back to the AT.
- ◆ Reporting Drug Not Found (DNF) events that occurred on SLS PCS back to the AT.
- ◆ Identification of drugs in the SLS Formulary that have not yet been edited (i.e., Unedited).
- ◆ Smart Copy of DNF drugs or newly added drug(s) to the formulary.

NOTE: A hand scanner, preferably the one used for adding and verifying drugs in the AT, should be connected to the personal computer (PC) running the AT for managing verification and Drug Not Found processes.

NOTE: If the AT was closed, in order to receive the latest updates from SLS PCSs, log into the AT, go to the AT Device Manager, open up the MDL, and connect to the SLS PCSs.

Drug Verification

Previously, the AT user wouldn't be able to immediately know when a drug that was not verified in the AT was verified on an SLS unless they were told or they received notification from Email Notifier.

Now when a drug is verified on SLS PCS rather than on the AT, the verified drug information is sent back to the AT letting the AT user know of the issue. To support this improved workflow, the AT Formulary tab now has a Verifications tab and Verification Events groups.

NOTE: With this verification information, the AT user can update the existing formulary and distribute a new formulary package to all SLS PCSs so that other SLS PCS users do not also have to verify the same drug that had been verified on a different SLS PCS.

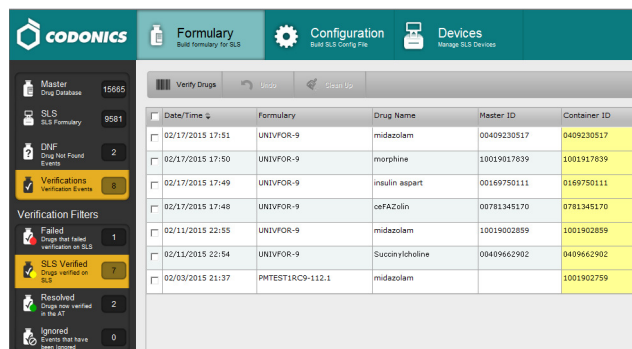
When a subsequent verification occurs on any SLS PCS that has not been updated, those PCSs will report back to the AT and add the specific formulary package number to the drug entry whether it is in the SLS Verified or Resolved group.

The following are recommended workflows for different use cases to process drug verification(s) that have occurred on SLS PCS and been reported back to the AT.

NOTE: If a verification event is identified, the AT user should obtain the container(s) associated with the event.

Use case: A drug is verified on SLS PCS because it was not verified in the AT

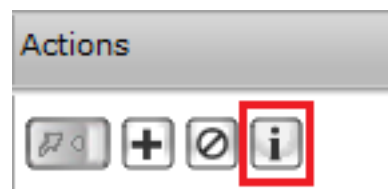
1. When a drug is verified on SLS PCS, the AT will display information for that drug in the SLS Verified filter. It will show the Date/Time of the verification, the formulary in which the drug entry exists, and all the information defined for the drug in the MDD including Drug Name, Master ID (MID), if available, and the Container ID (CID), highlighted in yellow. The AT screen looks like:



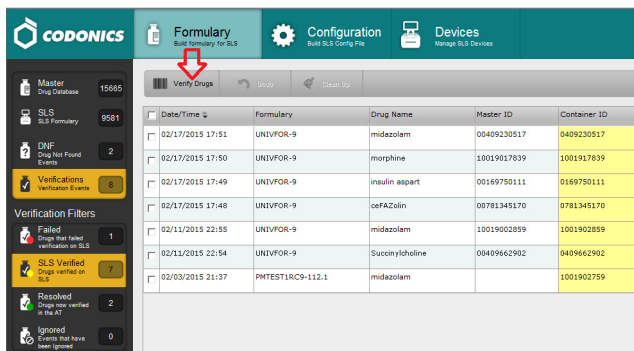
Date/Time	Formulary	Drug Name	Master ID	Container ID
02/17/2015 17:51	UNIVFOR-9	midazolam	00409230517	0409230517
02/17/2015 17:50	UNIVFOR-9	morphine	10019017639	1001917639
02/17/2015 17:49	UNIVFOR-9	insulin aspart	00169750111	0169750111
02/17/2015 17:48	UNIVFOR-9	cefAZolin	00781345170	0781345170
02/11/2015 22:55	UNIVFOR-9	midazolam	10019002859	1001902859
02/11/2015 22:54	UNIVFOR-9	Succinylcholine	00409662902	0409662902
02/03/2015 21:37	PMTST18C9-112.1	midazolam		1001902759

NOTE: The SLS Verified group only appears when Verify on SLS is turned off (i.e., unchecked) as part of the Configuration settings.

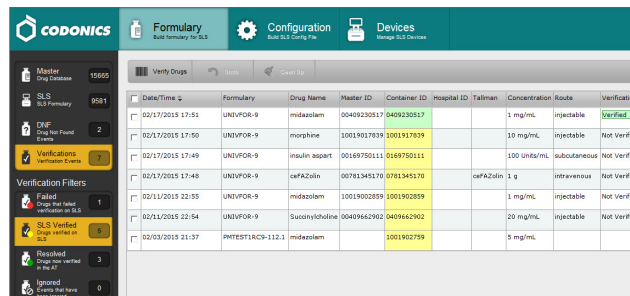
2. Clicking the information button, i, for the verification event will provide verification event information including which SLS PCS the verification occurred, the user who verified it, and the drug information reported.



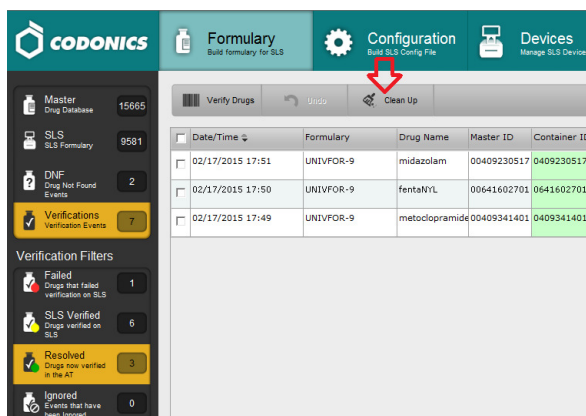
- Once you have the drug container associated with the verified drug on SLS PCS, you should click Verify Drugs.



- The Container ID (CID) of the drug that was verified will turn green and its status will be displayed as Verified.

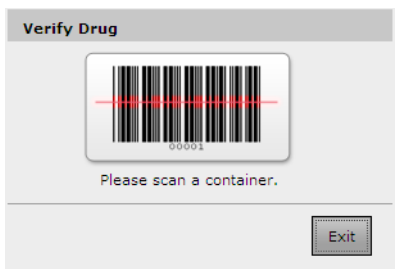


- Although the entry is updated, it will be displayed in the SLS Verified group until you click over to another part of the AT. Then it will be displayed in the Resolved group.

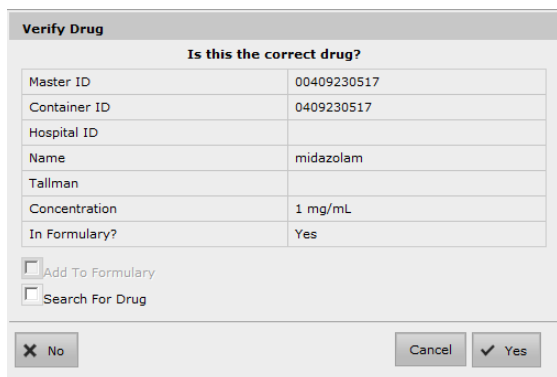


NOTE: In order to verify drugs, the formulary needs to be Under Development.

- The AT will display a Verify Drug dialog. Scan the container with the hand scanner attached to the AT computer.



- A Verify Drug dialog will be displayed. Verify that the information about the drug is correct. Since the drug is already in the formulary, the Add to Formulary box will be grayed out.



NOTE: Verification issues that are Reconciled or Ignored and are more than 30 days old can be manually pruned from the system using the Clean Up button on the top toolbar.

- The AT user can now update the existing formulary and distribute a new formulary package to all SLS PCSs so that other SLS PCS users do not also have to verify the same drug that had been verified on a different SLS PCS.

NOTE: When a subsequent verification occurs on any SLS PCS that has not been updated, those PCSs will report back to the AT and add the specific formulary package number to the drug entry whether it is in the SLS Verified or Resolved group.

Use case: Drugs that fail verification on SLS PCS

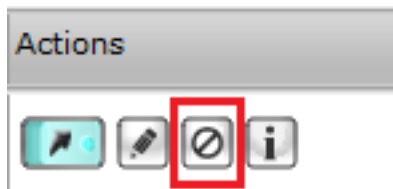
- When a drug fails verification on SLS PCS, the AT will display information for that drug in the Failed verification filter. There it will report the Date/Time of the failed verification, the formulary in which the drug entry exists, and all the information defined for the drug

in the MDD including Drug Name, MID (if available), and the CID, highlighted in red.

2. Review the drug information and find the container that was scanned that caused the failed verification.
3. It is possible that either the information in the formulary is incorrect (e.g., drug name, concentration, concentration units) or there is another drug that has the same CID.
4. If the information in the formulary is incorrect, update the formulary and deploy it to all SLS PCSs.
5. If it is another drug (e.g., name, concentration) with the same CID, then the second drug (along with all its drug information) should have its own drug entry entered in the MDD and formulary with the same CID as the first drug. The formulary should be deployed to all SLS PCSs. Once both drug entries are in the formulary, SLS PCS will ask a user which of the two drugs it is each time a container with this same CID is scanned.

Use case: Ignoring drugs that are verified on SLS PCS (successfully or failed)

1. If there is a drug entry that you do not want to verify in the AT, you can select the ignore icon in the Actions column of the SLS Verified filter.



2. You will be asked to confirm that you want to move the drug entry to the Ignored filter. Select Yes.
3. The drug entry will be moved to the Ignored filter.

NOTE: Drug entries that are Ignored and are more than 30 days old can be manually pruned from the system using the Clean Up button on the top toolbar.

Drugs verified with 1.7.0 or older software

For drugs that were verified on an SLS PCS with 1.7.0 or older software within 30 days of upgrading SLS PCS to 1.9.0, only the CID will be reported back to the AT.

1. The AT will determine if there are any matching drugs (i.e., CID matches). If the CID of the verified drug matches a single CID in the MDD, the AT will automatically populate the drug information in the drug entry. If there is not a single match, the AT will only show the CID, highlighted in yellow. If the drug is a verified failed, the CID will be highlighted in red.

2. If there is not a single match, the AT will only show the CID that was scanned on SLS PCS. In this use case, you should click the Add icon.



3. If there isn't an exact CID match, but there is/are 10 to 11 digit MID mappings, then the AT will display the mapping option(s) for the user to review and select.

NOTE: If there are multiple CID matches (i.e., duplicate CIDs for different drugs) both drug entries will be displayed and you will need to choose the correct drug. However, because there are two drugs with the same CID in the MDD, you will not be able to verify the drug.

4. If you select a mapped drug, the AT will automatically populate all the drug information on the Edit Drug dialog and prompt you to Save the drug information (including the CID) in the MDD. The AT will then return you to the SLS Verified filter with all the information now filled-in for the drug.
5. Review the drug entry information.
6. Follow the steps starting with step 3 in the previous section, Use Case: A drug is verified on SLS PCS because it was not verified in the AT.

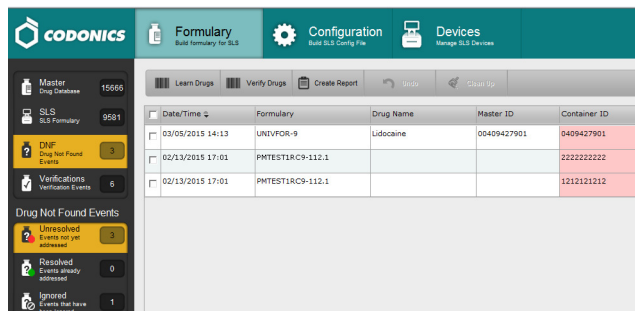
Drug Not Found

When a drug is not in the formulary and a SLS PCS user scans the drug container on SLS PCS, a Drug not found (DNF) message is displayed on the SLS PCS. A user has always been able to print a custom Blank label to ensure proper labeling of a syringe. Now the DNF information is sent back to the AT Formulary letting the AT user know of the issue.

NOTE: With this DNF information, the AT user can update the existing formulary and distribute a new formulary package to all SLS PCSs so that other SLS PCS users do not experience a DNF issue for the same drug.

For those SLS PCSs that aren't updated, when a subsequent DNF occurs, they will report back to the AT and add the specific formulary package number to the drug entry(ies) whether it is resolved or still unresolved.

To support this workflow, the AT Formulary tab now has a DNF tab and a Drug Not Found Events group. Now when a DNF on SLS PCS occurs, the PCS will report the CID to the DNF tab in the AT. Clicking on the Unresolved group displays an entry with the available information.



Clicking the information button, **i**, in the Actions column for the DNF event will provide DNF event information including which SLS PCS the event occurred and the user who scanned the container.



Once the **i** button is clicked, a screen will appear:

To process any DNF event(s) that have occurred on SLS PCS and been reported back to the AT, the following are recommended workflows for different use cases.

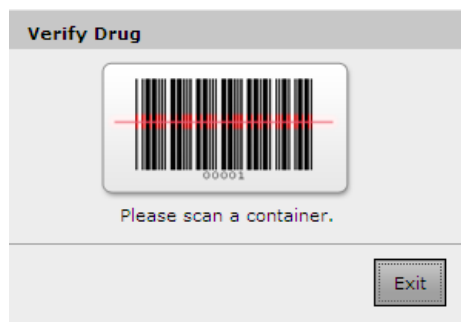
NOTE: If a DNF event is identified, the AT user should obtain the container(s) associated with the event.

Use case: DNF with a single Container ID (CID) match in the MDD

1. If the CID of the DNF event matches a single CID in the MDD, the AT will automatically populate the drug information in the Unresolved screen. The CID will be highlighted in red.

Date/Time	Formulary	Drug Name	Master ID	Container ID
03/05/2015 14:13	UNIVFOR-9	Lidocaine	00409427901	0409427901

2. Once you have the container, you should click on the Verify tab to verify the drug container.
3. The Verify Drug dialog will appear.



4. Using the hand scanner attached to the AT PC, scan the container. A Verify Drug dialog box is displayed which allows you to verify the drug container information as well as automatically add the drug to the formulary.

- After verifying the information is correct, click **Yes**. The entry is updated, turns green, and is added to the **Resolved** group.

Date/Time	Formulary	Drug Name	Master ID	Container ID	Hospital ID	Tallman	Concentration	Route	Verification
03/05/2015 14:13	UNIVFOR-9	Lidocaine	00409427901	0409427901			1 %		Verified X
02/13/2015 17:01	PHTESTAR C9-112.1			3222222222					
02/13/2015 17:01	PHTESTAR C9-112.1			1212121212					

NOTE: The entry is updated and will be displayed in the **Unresolved** group until you click over to another part of the AT. It then will be displayed in the **Resolved** filter.

Date/Time	Formulary	Drug Name	Master ID	Container ID
03/05/2015 14:13	UNIVFOR-9	Lidocaine	00409427901	0409427901

- You can then go to the **Unedited** filter in the formulary (see **Unedited** filter later in this Technical Brief) to define the drug's formulary settings.

Use case: DNF whose 10-digit CID maps to a drug's 11-digit MID in the MDD

- If the CID of the DNF event doesn't match a CID in the MDD, the DNF event will only display the CID of what was scanned on SLS PCS. The CID will be highlighted in red.

Date/Time	Formulary	Drug Name	Master ID	Container ID
03/05/2015 14:13	UNIVFOR-9			0409427901

- You should click on the **Add** icon in the **Actions** column.



- The AT will determine if there are any matching drugs (i.e., CID matches). If there isn't an exact match, but there are any 10- to 11-digit MID mappings, the AT will display mapping option(s) for the user to review and select.

Choose a Drug

Choose a mapped drug for the Container ID 0409427901

Drug Choices:

- ☒ Name: Lidocaine
Master ID: 00409427901
Container ID:
Hospital ID:
Concentration: 1 %

- If you select a mapped drug, the AT will automatically populate all the drug information in the **Editing Master Drug** dialog.

Editing Master Drug(s) Lidocaine

☐ Combination Drug

Master ID: 00409427901

Container ID: 0409427901

Hospital ID:

Name: -

Tallman:

Concentration: %

Route:

Status:

☒ Add to Formulary

Wrong Drug for this Container ID?

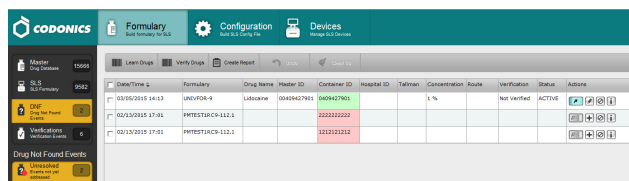
- After clicking **Save**, a dialog will ask you to confirm the entry. Click **Yes** and the entry will be added to the MDD.

Edit Drug

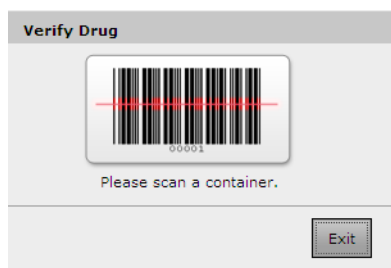
Confirm: Edit this drug?

Master ID	00409427901
Container ID	0409427901
Hospital ID	
Name	Lidocaine
Tallman	
Concentration	1 %
Route	
Status	ACTIVE

- The AT will then return you to the **Unresolved** group with all the information now filled in for the drug.



- Review the drug entry information. Once you have the container, you should click **Verify**. The AT will display a **Verify Drug** dialog and you should scan the container using the hand scanner attached to the AT PC.



- A **Verify Drug** dialog will be displayed. Verify the information about the drug is correct. If the drug is not already in the formulary, you can check the box **Add to Formulary**.

Verify Drug

Is this the correct drug?

Master ID	00409427901
Container ID	0409427901
Hospital ID	
Name	Lidocaine
Tallman	
Concentration	1 %
In Formulary?	Yes

☐ Add to Formulary

☐ Search For Drug

- If the information is correct, click **Yes**. The drug's CID will turn green, it will be verified and shown as added to the formulary via the green arrow in the **Actions** column.

Date/Time	Formulary	Drug Name	Master ID	Container ID	Hospital ID	Tallman	Concentration	Route	Verification	Status	Actions
03/05/2015 14:13	UNIVOR-9	Lidocaine	00409427901	0409427901			1 %		Verified ✓	ACTIVE	

NOTE: The entry is updated and will be displayed in the **Unresolved** group until you click over to another part of the AT. Then it will be displayed in the **Resolved** group.

- You can then go to the **Unedited** filter in the formulary (see **Unedited** filter later in this Technical Brief) to define the drug's formulary settings.

Use case: Ignoring DNF Events from SLS PCS

- If there is a DNF that you do not want to reconcile in the AT, you can select the ignore icon in the **Actions** column.



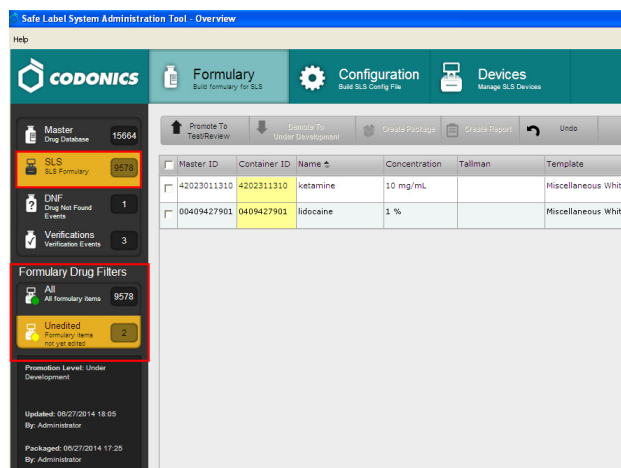
- You will be asked to confirm that you want to move the drug entry to the **Ignored** filter. Click **Yes**.
- The drug entry will be moved to the **Ignored** group.

NOTE: Drug entries that are **Ignored** and are more than 30 days old can be manually pruned from the system using the **Clean Up** button on the top toolbar.

Unedited Formulary Drugs

When a drug is added to the SLS Formulary (whether it is manually from the MDD, from the verification process, or from the DNF process previously discussed), but you haven't edited the entry's drug settings (e.g. drug classification template, message, dilution, diluents etc.), a new workflow improvement has been added to easily find those drugs.

Now, the SLS Formulary tab has a **Formulary Drug Filters** group and an **All** and an **Unedited** filter. To easily find those drug entries that have not yet been edited, click the **Unedited** filter which will display each drug in the formulary which has not yet been edited.



The CID will be highlighted in yellow until the drug is edited.

NOTE: Once the drug is edited, the entry is updated and displayed in the **Unedited** list but no longer highlighted in yellow. The entry remains in this filter until you click over to another filter or tab. You can edit the drug again at any time.

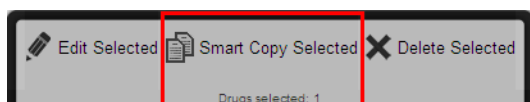
It is recommended that you complete all your edits on a drug before clicking on another filter or tab because this will be the easiest way to see which drug(s) you have been editing.

Smart Copy

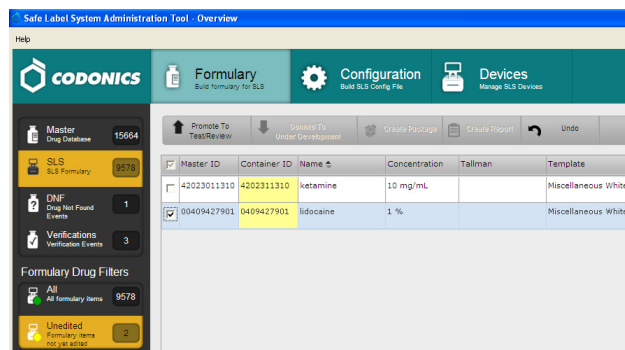
To aid in editing drugs that have been added to or are already in the formulary, a new workflow improvement, Smart Copy, has been added.

Smart Copy allows you to copy formulary settings from an already-edited drug with the same name and concentration so that settings do not need to be manually entered for each formulary drug.

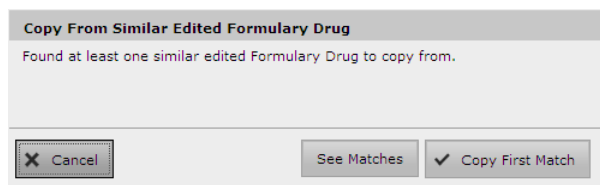
A new icon for Smart Copy was added to the **Actions** column of the formulary and to the **Edit** selected buttons at the bottom of the formulary.



1. Select the desired drug entries that have the same name and concentration.



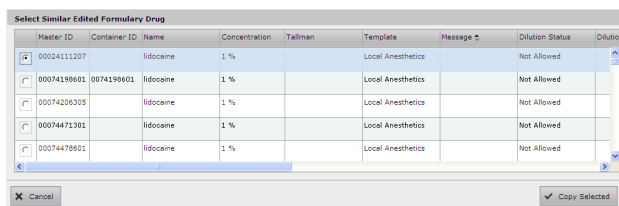
2. Click the Smart Copy icon.
3. A dialog box will be displayed. You will be asked whether you want to see all the matching drugs already in the formulary or whether you want to copy the first matching drug in the formulary.



WARNING: Clicking Copy First Match can result in an entry that has different or no messages or unwanted information. See Matches is recommended for safety to see all the options and select the best choice.

4. If you click See Matches, all already-edited formulary drug entries that have matching drug name and concentration as the selected drug(s) will be displayed.

NOTE: The list of similar drugs will be sorted by the Message column in ascending order.



- Review all of the drug entries and select the one you want to Smart Copy the drug information from.
- The Smart Copy - Editing Formulary Drug(s) dialog will be displayed showing all the settings for the edited drug selected in step 5 that will be applied to the unedited drug(s). Saving (and possibly changing) these settings will not affect the edited drug selected in step 5. It will only affect the drug(s) selected for Smart Copy.

Smart Copy - Editing Formulary Drug(s) - lidocaine

NOTE: Changes to the selected formulary drug(s) do not affect the formulary drug being copied.

Lidocaine

1 %

Expires: 06/28/2014 18:17

Prepared: 06/27/2014 18:17

By: [Signature]

Template: Local Anesthetics Drug Classifications

Message: [Text Box]

Audio: lidocaine.wav Play

No Audio (Silence) Play

Expire Time: 24 Hours

Dilution Status: Not Allowed

Preparation Method: Normal Dilutions

Dilutions: [List Box] Edit

Total Dose / Total Volume: [List Box] Edit

Cancel Save

- Review all the settings (e.g., Drug Classification, Message, Audio, Expiration Time etc.) and make any modifications to the drug entry. When done editing, click Save to update the drug(s) selected for Smart Copy.

NOTE: Any changes made on the Smart Copy Edit dialog, for example adding a message, will NOT affect the edited drug that you have copied from step 5.

- The selected entries are updated. If you remain on the Unedited filter, previously unedited entries are now no longer highlighted in yellow. The entry remains in this filter until you click over to another filter or tab. You can edit the drug again at any time.

Safe Label System Administration Tool - Overview

Help

CODONICS Formulary Configuration Devices

Build Formulary for SLS Build SLS Config File Manage SLS Devices

Promote To Test/Review Remove To Under Development Create Package Create Report Undo

Master ID	Container ID	Name	Concentration	Tallman	Template
42023011310	4202311310	ketamine	10 mg/mL		Miscellaneous White
00409427901	0409427901	lidocaine	1 %		Local Anesthetics

Formulary Drug Filters

All All Formulary Items 9578

Unedited Unedited Formulary Items not yet edited 1

NOTE: It is recommended that you complete all your edits on a drug before clicking on another filter or tab because this will be the easiest way to see which drug(s) you have been editing.

Technical Support

If problems occur during operation, contact Codonics Technical Support at any time.

Phone: +1.440.243.1198
 Email: support@codonics.com
 Website: www.codonics.com

Get it all with just one call
800.444.1198

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17991 Englewood Drive
 Middleburg Heights, OH
 44130 USA
 +1.440.243.1198
 +1.440.243.1334 Fax
 Email info@codonics.com
 www.codonics.com

Codonics Trading Co, Ltd.
 317 Xianxia Rd. Building B
 Unit 1412
 Changning Dist., Shanghai
 P.R. China, 200051
 86-21-62787701
 86-21-62787719 Fax

Codonics Limited KK
 AQUACITY 9F,
 4-16-23, Shibaura
 Minato-ku, Tokyo,
 108-0023 JAPAN
 81-3-5730-2297
 81-3-5730-2295 Fax