

SAP Pharmaceuticals



ADDON.IDESISPH

Release 4.6C



Copyright

© Copyright 2001 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft[®], WINDOWS[®], NT[®], EXCEL[®], Word[®], PowerPoint[®] and SQL Server[®] are registered trademarks of Microsoft Corporation.

IBM[®], DB2[®], OS/2[®], DB2/6000[®], Parallel Sysplex[®], MVS/ESA[®], RS/6000[®], AIX[®], S/390[®], AS/400[®], OS/390[®], and OS/400[®] are registered trademarks of IBM Corporation.

ORACLE[®] is a registered trademark of ORACLE Corporation.

INFORMIX[®]-OnLine for SAP and Informix[®] Dynamic Server[™] are registered trademarks of Informix Software Incorporated.

UNIX[®], X/Open[®], OSF/1[®], and Motif[®] are registered trademarks of the Open Group.

HTML, DHTML, XML, XHTML are trademarks or registered trademarks of W3C[®], World Wide Web Consortium, Massachusetts Institute of Technology.

JAVA[®] is a registered trademark of Sun Microsystems, Inc.

JAVASCRIPT[®] is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

SAP, SAP Logo, R/2, RIVA, R/3, ABAP, SAP ArchiveLink, SAP Business Workflow, WebFlow, SAP EarlyWatch, BAPI, SAPPHIRE, Management Cockpit, mySAP.com Logo and mySAP.com are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other products mentioned are trademarks or registered trademarks of their respective companies.

Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options. Cross-references to other documentation
Example text	Emphasized words or phrases in body text, titles of graphics and tables
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, names of variables and parameters, source code as well as names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key

Contents

SAP Pharmaceuticals	5
Make-to-Stock Production in the Pharmaceutical Industry	6
Additional Process Information	7
Data Used During This Process.....	8
Analyzing the Product Group Hierarchy.....	9
Creating or Changing Sales and Operations Planning (SOP)	10
Executing MRP	12
Creating and Releasing Process Orders	14
Sending the PI Sheet.....	18
Maintaining the PI Sheet for Tablet Production	19
Sending the Process Messages (N-2100)	21
Delivering Material	22
Maintaining the PI Sheet for Tablet Packaging	23
Sending the Process Messages (N-2000)	25
Analyzing Messages in the Process Order.....	26

SAP Pharmaceuticals

[Make-to-Stock Production in the Pharmaceuticals Industry \[Page 6\]](#)

Make-to-Stock Production in the Pharmaceutical Industry

Make-to-Stock Production in the Pharmaceutical Industry

Purpose

This process describes a possible scenario for the tablet production in a pharmaceutical company. It is a multi-level production. The finished product "packed tablets" is planned according to the planning strategy "planning with final assembly".

You can find more information about this process under [i](#) [Page 7].

Process Flow

You can find the data for this process under [?](#) [Page 8].

If you need to create the necessary starting situation for this process, choose [R](#) [Ext.].

1. [Analyzing the Product Group Hierarchy](#) [Page 9]
2. [Creating or Changing Sales and Operations Planning \(SOP\)](#) [Page 10]
3. [Executing MRP](#) [Page 12]
4. [Creating and Releasing the Process Order](#) [Page 14]
5. [Sending the PI Sheet](#) [Page 18]
6. [Maintaining the PI Sheet for Tablet Production](#) [Page 19].
7. [Sending the Process Messages \(N-2100\)](#) [Page 21]
8. [Delivering Material](#) [Page 22]
9. [Maintaining the PI Sheet for Tablet Packaging](#) [Page 23]
10. [Sending the Process Messages \(N-2000\)](#) [Page 25]
11. [Analyzing Messages in the Process Order](#) [Page 26]

Additional Process Information

After analyzing the product group, you create or change the sales and operations plan for the product group. You disaggregate the quantities to the members (materials) and transfer them to demand management as planned independent requirements.

You then carry out multi-level material requirements planning for the finished product N-2000. From the stock/requirements list, you convert the planned order generated during this MRP run into a process order. In this way, you create a process order for the manufacture of a batch. This order includes all of the data relevant for production based on a master recipe. You also create a process order for the tablet packaging.

You then perform additional planning steps required to release a process order (manual batch determination). When you save the process order, the system generates an inspection lot for in-process quality inspection.

You create and maintain the PI sheets.

In doing this, confirmations are made and material movements are posted.

Data Used During This Process

Data Used During This Process

Fields	Data	Description	Master recipe
CATT	ZID_MM_CBUCH		
Plant	1100		
Product group	N-PG2000	Cetepharm N tablets	
- Members: proportion 50 %	* N-2000	Cetepharm-N (20 pieces)	
30 %	* N-2001	Cetepharm-N (50 pieces)	
20 %	* N-2002	Cetepharm-N (100 pieces)	
Material (FERT)	N-2000	Cetepharm-N (20 pieces)	N-0000
Material (HALB)	* N-2100	Cetepharm N tablet	N-2100
	** N-2110	Acetylsalicylic acid	N-2110
Material (ROH)	** N-2120	Cornstarch	
	** N-2130	Cellulose powder	
	** N-2140	Aspartam	
	* N-2200	Blister	
	* N-2300	Leaflet	
	* N-2400	Folded box	
	* N-2500	Aluminum foil	

Analyzing the Product Group Hierarchy

1. Call up the transaction as follows:

Menu Path	<i>Logistics → Production - Process → SOP → Product Group → Display</i>
Transaction Code	MC85

2. Enter the following data:

Field	Data
Product group	N-PG2000
Plant	1100

3. Choose .
4. The proportional distribution to the lower-level members of the product group is displayed.
5. Choose *Hierarchy graphic*.
The complete structure of the product group is displayed.
6. Choose  until the overview tree appears.

Creating or Changing Sales and Operations Planning (SOP)

Creating or Changing Sales and Operations Planning (SOP)

Use

You define a sales plan for 3 month and the product group N-PG2000. A rough-cut production plan is then derived from this sales plan. This production plan for the product group is transferred to demand management and is disaggregated to the individual materials.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>SOP</i> node, choose <i>Planning</i> → <i>For Product Group</i> → <i>Change</i>
Transaction Code	MC82; MC75

2. Choose *Active version*.
3. Starting with the month after next, enter 50000 cartons as the sales quantities planned for the three consecutive months.
4. Define a rough-cut production plan based on your sales plan.

Choose *Edit* → *Create production plan* → *Synchronous to sales*.

5. Choose .
6. Choose .

Disaggregate the planned quantities of your production plan to the individual product group members and transfer the result to demand management.

7. From the *For Product Group* node, choose *Transfer Product Group to Planning*.
8. Enter the following data:

Field	Data
Product group	N-PG2000
Plant	1100
Version	A00
Prod. plan for mat. or PG members as proportion of PG	Select
Invisible transfer	Select
Active	Select

9. Choose *Transfer now*.



To skip any messages, choose .

The message log appears.

Creating or Changing Sales and Operations Planning (SOP)

10. Choose  until the overview tree appears.

Executing MRP

Executing MRP

Use

You now execute multi-level requirements planning for the finished product N-2000, and then check the results. You check whether the sales plan is transferred correctly to demand management.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>Production - Process</i> node, choose <i>MRP</i> → <i>Evaluations</i> → <i>Stock/Requirements List</i>
Transaction Code	MD04; MD02

2. Choose the *Collective access* tab , then enter the following data:

Field	Data
Plant	1100
Product group	Select
Product group description (field after the <i>Product group</i> radio button)	N-PG2000

3. Choose .
4. Choose .
5. Choose  *Selected stock/requirements lists*.
6. To select the second material, choose .
7. To select the third material, choose .
8. Choose  until the overview tree appears.
9. In the dialog box, choose Yes.
 Now, carry out MRP for material N-2000.
10. From the *MRP* node, choose *Planning* → *Single Item, Multi-Level*.
11. Enter the following data:

Field	Data
Material	N-2000
Plant	1100
Processing key	NETCH
Create purchase req.	2
Delivery schedules	3
Create MRP list	1

Planning mode	3
Scheduling	1
Also plan unchanged components	Select
Display material list	Select

12. Choose .

To skip the information message, simply choose .

The statistics overview appears.

13. Choose  *Materials*.

You can see the overview of the planning results.

14. Select the first item in the list, then choose  *Selected results*.

You see the planning results based on the planned orders generated during MRP for the finished product.

15. Choose  until the overview tree appears.

In the dialog box, choose Yes.

Creating and Releasing Process Orders

Creating and Releasing Process Orders

Use

From the current stock/requirements list, the system converts the planned orders into process orders. You then carry out additional transactions in the process order, such as order approval, batch determination, release, and control recipe creation. First, you make a number of settings for the new user interface.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>MRP</i> node, choose <i>Evaluations</i> → <i>Stock/Requirements List</i>
Transaction Code	MD04

2. Enter the following data:

Field	Data
Material	N-2000
Plant	1100

3. Choose .

4. Choose *Show overview tree*.

The worklist tree is displayed. It contains all the materials that you have maintained in the corresponding transaction or all the materials that you have selected in the collective display.

5. To switch to the order tree, choose .

6. To confirm any information messages, choose .

Now select a navigation profile.

7. Choose *Environment* → *Navigation profile* → *Assign*.

8. Enter the following data:

Field	Data
Navigation profile	Z_IDES_01

9. Choose .

With the Z_IDES navigation profile, for example, you can execute separate transaction calls for the transactions. You can, for example, navigate to the MRP list or the master recipe.

10. In the overview tree, double-click material N-2100.

11. Choose  for the first planned order (PIOrd.).

12. In the dialog box, choose --> *Proc. order*.

13. To confirm the message, choose .

Creating and Releasing Process Orders

The system creates a process order.

The *Create Process Order: Header – General Data* screen appears.

14. Choose .

The order has the status APNG (Approval not granted). You can specify that changing and creating master recipes is subject to a detailed, company-specific approval procedure. When releasing the procedure, the system marks the edited recipe as an approved recipe. In Customizing, you can specify that a process order can only be created when it is based on an approved recipe. After the process order has been created, you can only change the planning data in the process order. You can specify that a user needs a special authorization to be able change further data.

Our master recipe has not been approved so that the user can still change it. You will then perform an individual approval in the order. You can use a user status to restrict an individual approval to certain persons with a special authorization. In our order type, the recipe must be approved before the process order can be released. Once it has been approved, you can no longer change operations, phases, or materials.

15. Choose .

You approve the process order manually.

16. Choose *Process order → Functions → Approval → Individual approval*.



Note the system status field. The order now has the status APG (Approval granted) and APGS (Single approval granted).

17. Choose the *Goods recpt* tab. You can now create the batch that is to be produced with this order.

18. Enter the following data:

Field	Data
Batch	175-N-2100

19. Choose .



If this batch master record does not yet exist, the *Batch Handling* dialog box appears. Choose Yes.

20. Choose  *Materials*.

21. On the *Create Process Order: Material List* screen, enter batch number N-2110-1 in the *Batch* field for material N-2110.

22. To release the process order, choose .

To skip any information messages, choose .



The system now checks the material availability for each material. At the same time, it performs an automatic batch determination for the components N-2120, N-2130, N-

Creating and Releasing Process Orders

2140.

The process order was released and the control recipe was generated. This is controlled by a production scheduling profile that also determined the process order type PI04 during planned order conversion. The profile is defined in the material master in the *Work Scheduling* view.

Furthermore, the system created an inspection lot.

23. Choose .

24. Choose .

You can now check whether the planned order has been converted into a process order.

25. In the overview tree, double-click material N-2000.

26. Create the process order for the finished product N-2000.

27. Choose  for the first planned order (PIOrd.).

28. Choose --> *Proc. order*.

To skip any information messages, choose .

The system creates a process order.

29. On the *Create Process Order: Header* screen, choose *Process order* → *Functions* → *Approval* → *Individual approval*.

30. Choose the *Goods recpt* tab. You can now create the batch that is to be produced with this order.

31. Enter the following data:

Field	Data
Batch	175-N-2000

32. Choose .



If this batch master record does not yet exist, the *Batch Handling* dialog box appears. Choose Yes.

33. Choose  *Materials*.

34. On the *Create Process Order: Material List* screen, enter batch number 175-N-2100 in the *Batch* field for component N-2100.

35. To release the process order, choose .

To skip any warning messages, choose .

36. Choose .

37. Choose .

38. You can now check whether the planned order has been converted into a process order.

39. Choose  until the overview tree appears.

Sending the PI Sheet

Sending the PI Sheet

Use

The control recipes for the process orders of material N-2100 and N-2000 are sent to the control recipe destination TB (tablet production). The following functions are performed: send PI sheet, update control recipe status.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>Production - Process</i> node, choose <i>Process Management</i> → <i>Control Recipe</i> → <i>Control Recipe Monitor</i>
Transaction Code	CO53

2. Enter the following data:

Field	Data
Plant	1100
Status	Select all
Mode	Select <i>No test</i>
Process order	No entry

3. Use the value help to select destination address GRP. TAB.
4. Choose .
5. Choose  *Display*.

The *Control Recipe Monitor: Overview* screen appears.

6. Choose .
7. Choose  *Send*.

The system sends the control recipes to the relevant destinations.

8. To check the status, choose .
9. Choose  until the overview tree appears.

Maintaining the PI Sheet for Tablet Production

Use

You maintain the PI sheet for material N-2100. With it, the system performs completion confirmations, posts material movements, and records in-process quality inspections.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>Process Management</i> node, choose <i>PI Sheet</i> → <i>Find</i>
Transaction Code	CO60

2. Enter the following data:

Field	Data
Control recipe	Control recipe number for destination TB
Alternatively, search by Plant Ctrl rec.destination Material number	1100 TB N-2100
Alternatively, search by Process order	Process order number for material N-2100
All other entry fields	Delete default values

3. Choose .
4. Double-click your process order number to select the PI sheet.
5. Choose *PI sheet* → *Display* → *Maintain*.
6. Maintain the PI sheet step by step.



In the PI sheet, you have to execute a signature:

- At the start of the PI sheet
- At the end of all phases
- At the end of the PI sheet

Each time enter the user *WF-PP-E* and choose .

Then the system requests a password.

Enter *ENJOY IDES*, then choose .

7. For the phase 0011, report the weighed actual quantities for the ingredients.

You can use the value help to transfer the planned quantities as default values for the actual quantities to be reported.

8. Then report the completion of phase 0011 with your signature (WF-PP-E).

Maintaining the PI Sheet for Tablet Production

9. Record the inspection results for phase 0021 by double-clicking *Record inspection results* (yellow).
10. On the *Record Results for Inspection Point: Initial Screen*, choose the inspection point identification 1 and then choose .

If the dialog box does not appear, choose .

11. Choose .

The *Record Results: Characteristic Overview* screen appears.

12. Enter the following data:

Characteristics	Result
Sieve size	0.15 (mm)
Water content	1.1 (%)
Potency of active ingredient	98 (%)

13. Choose .

14. Choose .

15. Choose .

The *Valuation and Partial Lot Assignment* dialog box appears.

16. To assign a partial lot to your inspection point, choose  *Ptl lot*.

17. The *Create Partial Lot* dialog box appears.

18. In the *Description* field, enter "Entire production quantity" and choose .

The system assigns the inspection point to your batch 175-N-2100.

19. Choose .

You return to the PI sheet.

If not, choose *Assigned inspection points*.

20. Now maintain the PI sheet up to the last signature step by step.

21. Report the number of Cetepharm-N tablets produced for phase 0041.

You can use the default help to adopt the planned value.

22. When you have finished processing all phases, set the PI sheet to complete.

23. Choose *PI sheet* → *Set to complete*.

If the system requires your password, enter *ENJOY IDES*.

24. Choose  until the overview tree appears.

Sending the Process Messages (N-2100)

1. Call up the transaction as follows:

Menu Path	From the <i>Process Management</i> node, choose <i>Message</i> → <i>Message Monitor</i>
Transaction Code	CO54

2. Enter the following data:

Field	Data
Plant	1100
Process order	You number (choose the value help for material N-2100)

3. Choose .
4. Choose .
5. Choose  *Send*.
6. Choose .



Check the entry in the *Detailed sender status* column. The messages must all have the status *Sent* or *Sent with warning*. If some of the messages have the status *To be resubmitted* or *Destination error*, try to send them again. Then refresh the list. You may need to repeat this process.

7. Choose  until the overview tree appears.

Delivering Material

Delivering Material

1. Call up the transaction as follows:

Menu Path	From the <i>Production – Process</i> node, choose <i>Process Order → Environment → Material Movement → Post Material to Stock</i>
Transaction Code	MB31

2. Enter the following data:

Field	Data
Movement type	101
Order	Your order for material N-2100
Plant	1100
Storage location	0002

3. Choose .

If the batch number has not been transferred automatically, enter it manually.

The planned quantity is proposed as a default value for the actual quantity.

Change the default quantity, if necessary, with reference to the actual quantity reported in the PI sheet.

4. Choose .

To skip any messages, choose .

The *Goods Receipt for Order: Classification* appears.

The following value has been defined for the batch characteristic: potency of active ingredient 98 %. This value has been recorded in the in-process quality inspection for the respective inspection characteristic. The inspection characteristic value has been transferred to the batch characteristic after inspection point processing.

If the value is not proposed automatically, enter 98 % in the *Potency of active ingredient* field and choose .

5. Choose .

6. If any warning messages appear, choose .

7. The document is posted.

8. Choose .

Maintaining the PI Sheet for Tablet Packaging

You maintain the PI sheets for material N-2000.

Procedure

1. Call up the transaction as follows:

Menu Path	From the <i>Production - Process</i> node, choose <i>Process Management</i> → <i>PI Sheet</i> → <i>Find</i>
Transaction Code	CO60

2. Enter the following data:

Field	Data
Control recipe	Control recipe number for destination TB
Alternatively, search by Plant Ctrl rec.destination Material number	1100 TB N-2000
Alternatively, search by Process order	Process order number for material N-2000
All other entry fields	Delete default values

3. Choose .
4. Double-click your process order number to select the PI sheet.
5. Choose *PI sheet* → *Display* → *Maintain*.

Maintain the PI sheet step by step.



You must execute a signature at various occasions in the PI sheet. Each time, enter the user *WF-PP-E* and choose .

Then the system requests a password.

Enter *ENJOY IDES*, then choose .

6. For the phase 0011, report the used quantities of Cetepharm-N tablets, blister, instruction leaflets, folded boxes, and aluminum foil.

You can use the value help to transfer the planned quantities as default values for the actual quantities to be reported. Then report the completion of phase 0011 with your signature.

7. Now maintain the PI sheet up to the last signature step by step.
8. Report the number of packaged Cetepharm-N boxes.

You can use the value help to adopt the planned value.

Maintaining the PI Sheet for Tablet Packaging

9. When you have finished processing all phases and have executed the last signature, set the PI sheet to complete.
10. Choose *PI sheet* → *Set to complete*.
11. Choose  until the overview tree appears.

Sending the Process Messages (N-2000)

1. Call up the transaction as follows:

Menu Path	From the <i>Process Management</i> node, choose <i>Message</i> → <i>Message Monitor</i>
Transaction Code	CO54

2. Enter the following data:

Field	Data
Plant	1100
Process order	Your process order number for material N-2000 (or use the value help to search by material N-2000)

3. Choose .
4. Choose .
5. Choose  *Send*.
6. Choose .
7. Check the entry in the *Detailed sender status* column. The messages must all have the status *Sent*. If some of the messages have the status *To be resubmitted* or *Destination error*, send them again. Then refresh the list. You may need to repeat this process.
8. Choose  until the overview tree appears.

Analyzing Messages in the Process Order

Analyzing Messages in the Process Order

1. Call up the transaction as follows:

Menu Path	From the <i>Production - Process</i> node, choose <i>Process Order</i> → <i>Process Order</i> → <i>Display</i>
Transaction Code	COR3

2. Enter the following data:

Field	Data
Order	Your process order number

3. Choose .

4. Choose .

The order was assigned the following statuses due the maintenance of the PI sheet:

CNF: the order, the operations, and phases have been confirmed completely

PDLV: the packed tablets have been posted to the warehouse (final delivery)

GMPS: the ingredients have been withdrawn. If required, choose .

5. Choose  until the overview tree appears.