

## 13.04. Purchasing reports

Purchasing reports (focused on what you have ordered and what you have received and what you want to order) are available at *Report > Purchasing*. The following report types are available:

Purchase orders...  
Purchases...  
Suggest order quantities

The first 2 options contain several different reports (see below). Select the required report type by clicking on it.

### Purchase orders

Purchase order report options...

Type of report  
Ordered Item Report

Find Multiple Find Single

Date range  
Search by date type : Creation date  
From 23/05/14 To 23/05/2014 Today

Report on names whose...  
Name contains

Report on items whose...  
Item code starts with  
and Category 1 is Don't Care  
and department is Don't care

Report on Purchase Orders whose...  
Category is All categories  
Status is All  
cust\_purchase\_field equals  
cust\_purchase\_field2 equals

Cancel OK

## Types of report

There are seven reports currently available:

✓ **Ordered Item Report**  
 Goods received date vs Order date  
 Goods Received date vs Order date--Show Items  
 Outstanding Purchase Order Lines  
 Goods Received date vs Order date--Show Delivery Days  
 Purchase order vs good received broken down by batches  
 Purchase order Cash Flow Planning

- The *Ordered Item Report* will list items that are on Purchase Orders according to criteria specified.
- The *Goods Received date vs Order date* report lists each Goods Receipt for a particular Purchase Order and the number of lines received, then follows with details of the number of lines and date of the original Purchase Order, as in the example below. This is useful for tracking supplier delivery performance.

### Ordered Item vs.Goods Received Report Creation date : 30/04/2007 to 30/05/2007

Name	Order no.	Status	Date ordered	Lines in PO	Date inv. rec'd	Date goods rec'd	# lines
					30/05/07	22/05/2007	8
					30/05/07	30/05/2007	2
Bronze Age supplies	16	cn	25/04/07	8			10

Note that the number of lines received may not match the number ordered as a single Purchase Order line may be supplied in split deliveries, as in example shown, or an ordered line may not be supplied at all.

- The *Goods Received date vs Order date - Show items* report.
- The *Outstanding Purchase Order Lines* report, which will display all Purchase Order lines for Purchase Orders provided that
  - (1.) delivery is incomplete, and
  - (2.) the Purchase Order has a *Confirmed* ("cn") status.
- Note that Purchase Orders whose status is *Finalised* ("fn") will be ignored when producing this particular report.
- The *Goods Received date vs Order date - show Delivery days* report shows the number of days taken to deliver items.
- The *Purchase order vs goods received broken down by batches* report shows the dates particular batches were received.
- The *Purchase order cashflow planning* report shows you the values and times of expected deliveries so that you can plan when money needs to be available to pay for them.

## Date range and date type

A date option, for selecting which items/purchase orders to include in the report must be selected; options are:

- creation date - the date purchase orders were created
- sent date - the date purchase orders were confirmed
- expected delivery - the expected date of delivery for items
- actual delivery - the actual date that items were delivered

The report will include items/purchase orders with the selected *type* of date falling between two specified dates entered in the *From* and *To* fields. The drop-down list on the right affords many quick-choose preset date range options such as “today”, “yesterday”, “this week”, “last week”, “this month” etc.

### **Report on names...**

The report may be confined to suppliers meeting specific criteria by selecting one of several supplier properties (“Name”, “Name code”, “analysis”, “category”, “Price code” etc.) in the left dropdown list, “equals”, “starts with” or “contains” in the centre dropdown list and making an appropriate entry in the field on the right. If this field is left blank, the report will include purchase orders from all suppliers within the chosen date range.

### **Report on items...**

Similarly the report may be confined to items meeting specific criteria; you choose an item's property to filter on in the left dropdown list followed by the comparator in the centre dropdown list and finally making an appropriate entry is made in the field on the right. Again, leaving this field blank will produce a report on all items within the chosen date range.

You can also report on items that have a certain category and/or department. By default these options are set to “Don't care”, which means the item categories and departments will be ignored.

Note that only reports that report on *invoice lines* will produce meaningful results when you choose item criteria. Reports that report on whole transactions (e.g. “Each invoice grouped by name” or “Each invoice grouped by date”) will not produce meaningful data, as any one invoice can contain multiple items. Choose reports that report on invoice lines (e.g. “Each invoice line by item” or “Totals for each item grouped by month”) for these filters to have an effect.

### **Report on purchase orders...**

In the same way, you can also filter your reports on properties of the purchase orders involved: category, status and both purchase order custom fields. For more information on purchase order categories see [here](#)

## **Purchases**

Purchase report options...

Type of report  
General purchase report

Date Range  
From 20/08/13 To 20/08/2013 Today

Report on names whose...  
Name contains

Report on items whose...  
Item code starts...  
and Category is Don't Care  
and department is Don't care

Value greater than... 0

Which mode?  
☒ Both modes ☐ Store mode ☐ Dispensary mode

Cancel OK

This report finds all purchasing transactions over a certain value within a specified time period

You should enter:

- The date range of transactions on which to report
- Four filters are available to refine the report - a name filter, and three item filters; all are optionally and will be ignored if nothing is entered in the textbox or drop down lists are left at "Don't care".
- The value of a transaction line above which the report will cover.

It may be good for your organisation to have a purchasing policy that stipulates that transactions over a certain value must be authorised by a second party (that is, someone other than the purchaser). This report allows you to monitor such a policy easily.

## Suggested order quantities

Use this report for mSupply to analyse your current stock and, based upon a required number of months of stock cover which you enter, suggest how much of each stock item you should consider ordering.

There are currently 2 options for the suggested order quantities report: **Suggested ordering report** and **Suggested ordering [Excel] report**. They both have the same options as defined below but the second Excel only report will run much more quickly than the first one, even if the first one is exported to Excel. This is a temporary situation: the first option will be removed in a later version of mSupply and the Excel option will be the only option available.

## Quantification

Some logic behind the calculations involved in this report is described in detail on the [6.01. Ordering stock from suppliers](#) page.

As of version 7.15, mSupply supports a wide array of options for calculating AMC (Average Monthly Consumption), which is then used to forecast needs and then to calculate a requested order quantity.

The options are:

### Don't Adjust AMC

This has been the default in mSupply up until this point. The consumption (or distribution if not a service delivery point- we're using `_consumption_` interchangeably here) is summed up for the number of months specified in the lookback field, and divided by the number of months. This works well if the item was fully stocked for the whole time. It gives too low a number if stock was low or zero.

### Adjust by % of days out of stock

This method takes each month's consumption, and adjusts it for the number of days in the month the item was out of stock. We multiply the consumption for the month by (Days in month divided by Days in stock) to get adjusted AMC Take this example:

- Item B was in stock for 10 days in the month
- Its consumption was 500
- The adjusted AMC is  $500 \times 31 / 10 = 1,550$

### Only consider fully stocked months

Here, we are attempting to address months with low stock by excluding them from our calculations, rather than adjusting their consumption. There is a field shown “% of days in stock to be considered fully stocked” that defaults to “90%”

### mSupply's better algorithm

We've tried to come up with a better algorithm here by:

- ignoring months that are in stock for < 33% of days. That is, if the item was in stock for less than 10 days in the month, the consumption on those days is too erratic to draw conclusions about what the consumption for the whole month would have been.
- For months with stock  $\geq$  33% of days, Multiply the consumption for the month by  $\text{Square Root}(\text{Days in month} / \text{Days in stock})$  to get adjusted AMC. This adjusts the consumption up due to being out of stock, but by a factor up to 1.7 - so not as big an adjustment as the “Adjust by % of days out of stock” method.
- We also ignore months where the mean stock on hand is less than “% of typical AMC that stock

level is considered compromised:" value you enter. This is a bit complicated, but here's an example:

- Consider Item A - we have set the "when we calculate consumption there are 3 months that were "fully stocked" - those three months give us an AMC of 1500 per month.
- Now, there's another month that was fully stocked (as in, on all 31 days in the month, there was some stock on hand.
- But it turns out that the average stock on hand was only 50 - clearly they could never have had "normal" consumption, although they did have stock - if the cutoff is set to 100%, we're saying "ignore this month unless the average stock on hand was 1500 - in this case it's 50, so this month isn't used in the AMC calculations

We then sum the adjusted consumption for all the eligible months & divide by the number eligible months to get the best AMC eva 😊

Report options

You'll see this window:

Report options

Suggested ordering [Excel] report

Create a report to support ordering decisions. Customise the report by item name or code, or the number of days of stock cover required.

Include items whose...

Item code

starts with

(Leave this field blank to include all items)

and

Category 1

is

and

VEN Category

Don't Care

and

Department is

Don't Care

and

is on Master List

Don't Care

No. of items with these criteria: 0

and donor

equals

Only include items whose stock cover (in months) is less than

0

Base analysis on

6

Months of usage data

Months stock required

3

Calculate

Expected delivery

09/05/2024

AMC Adjustment for out of stock

Only consider fully stocked months

% of days in stock to be considered fully stocked:

90

Unit Price

Last price paid

Average price

According to supplier quote

Builds....

Include planned builds

Make sure planned builds will be covered

1

times

Include usage for build ingredients

Include items with suggested zero order quantity

Exclude transfers from usage calculations

Exclude Ad hoc and non stock items

Exclude items if "never order" is checked

Exclude stock that will expire within

months of projected consumption date

3

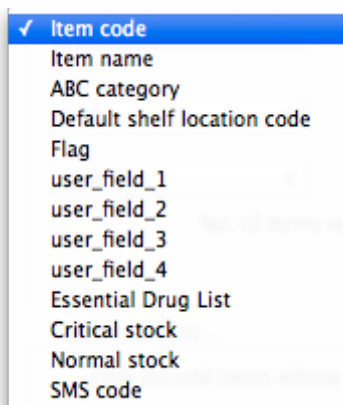
Complex Find

☒ Open report in Excel

Cancel

OK

If you want to report on all items, leave the item name field blank, otherwise enter an item name or code. For example, to report on amoxycillin stocks, you could enter "amox" into the field.



The drop down list, after the item name and code choices, lists several other fields, including any user defined fields, where the names that you have defined for custom item fields in the *Preferences* are displayed.

If you wish to use item categories, then use the *Item category* list to choose the one on which you want to report.

You can use the drop-down list to find Items with a particular code, or to use the values you have entered into one of the custom user fields. If this isn't powerful enough, use the *Complex Find* button to display the full query editor.

Click on the refresh button (double orange arrows) to show the number of items these basic parameters will find.

**Only include items whose stock cover is less than...:** If you want to report only on items whose stock is low, enter the threshold for days of stock on hand into the second field. For example, entering 90 into this field will only include items in the report whose stock is not sufficient to cover average usage for the next 90 days.

Enter "0" (zero) for this field to report on items with any amount of stock remaining.

**Expected delivery:** Enter an appropriate date based on previous delivery times.

**Include usage for build ingredients:** If you manufacture items, you can choose whether the use of ingredient lines in manufacturing is included in the report or not.

**Basis of analysis:** Enter the number of months of data (from the current date) mSupply should use to calculate your consumption.

**Exclude transfers from calculations:** Check this box if you wish transfers within your organisation to be excluded from the calculations.

**Include items with no usage in the last 12 months:** If this box is checked, items which have not been used over the last year will be included. This check box will have no effect if the previous "days cover" field is filled in, as an item with no usage will have "infinite" cover- any stock you do have is going to last you forever

**Months stock required:** In this field, enter the number of months stock cover you want to have available. The report will automatically take into account any stock you already have, so all you need to do is enter how many months cover you want.

**AMC Adjustment for Out of Stock:** See the "Quantification" discussion above on the different

options available.

**Exclude stock that will expire within 3 months of projected consumption date** is a new/updated checkbox to accurately predict amount of stock that is likely to be wasted due to expiry and current consumption rate. In this current example, mSupply will only aim to distribute stock if the expiry is more than 3 months away. This updated feature is only available in mSupply v7.12 or later.

This topic is huge so it may be worth reading this topic [Stock wastage prediction for ordering](#)

**Open report in Excel:** Checking this box opens Excel (or any other installed spreadsheet application) and displays the report as a spreadsheet. If you want to save the report, choose File > Save as... in your spreadsheet application.

## Report output

A typical `Suggested Order` report will look something like below.

Suggested ordering (Excel) report for store(s) Pharmacy store, Exclude items if "never order" is checked																
Reply Filter : Exclude stock that will expire within 3 months of projected consumption date, Months stock required : 12, Based on last 6 months usage data.																
Store	Item Code	Item Name	VEN	Item category	Stock on hand	Effective SOH	Expiring stock	Backorder	Stock on Order	ANC 12 mths	ANC 24 mths	Monthly usage for the last 6 months	Effective Months of Stock	Ordered quantity used	Suggested order	Forecast used
Pharmacy store	31005	Acetaminophen Tablet 500mg	N	2. Analgesics, Antipyretics, NSAIDs, Anti-Gout, DMARDs	0	0	0	0	0	0	0	4	17.0	0	159	N
Pharmacy store	78005	Aciclovir Cream 5%	E	13.9. Topical Antiviral Preparations	123	13	110	0	0	13	0	8	1.44	0	65	N
Pharmacy store	78002	Aciclovir Eye Ointment 3%	E	26.5. Topical Ocular Antiviral	75	8	67	0	0	2	1	1	2.67	0	32	N
Pharmacy store	31002	Aciclovir Tablet 200mg	E	6.6. Antivirals	520	420	90	0	0	44	51	88	1.34	0	587	N
Pharmacy store	04009	Adrenaline Injection 3mg/mL	V	12.7. Sympathomimetics	30	30	0	0	500	60	70	66	0.44	500	268	N
Pharmacy store	31006	Albucort Tablet 180mg	E	2.3. Medicines Used To Treat Gout	9,248	0	9,248	0	5,890	871	931	492	0	5,000	884	N
Pharmacy store	04000	Atropine - 50mg	V	10.2. Anti-cholinergics	0	0	0	0	0	0	0	1	0.0	0	2	F
Pharmacy store	81008	Azathioprine 1% (Miconic) Eye Drop	E	20.4. Other Ophthalmic Medication	20	20	0	0	0	4	4	7	2.88	0	68	N
Pharmacy store	04012	Azoxathioprine Injection 25mg/mL, 10mL	E	25.1. Bronchodilators	445	152	293	0	0	11	17	13	11.89	0	8	N
Pharmacy store	04013	Amiodarone Injection 50mg/mL, 3mL	E	12.2. Anti-Arhythmics	70	70	0	0	0	12	0	8	6.75	0	38	N
Pharmacy store	31007	Amiodarone Tablet 200mg	E	12.2. Anti-Arhythmics	660	660	0	0	0	20	24	68	11	0	59	N
Pharmacy store	31215	Amiodarone Tablets 100mg	E	12.2. Anti-Arhythmics	16,390	14,913	1,477	0	0	1,800	1,311	1,800	7.49	0	8,803	N
Pharmacy store	51136	Amoxicillin 250mg/5ml Effor	E	9. Anti-infective medicines	838	138	700	0	0	15	6	28	9.52	0	149	N
Pharmacy store	51138	Amoxicillin 125mg/5ml powder for soup 100ml	N	9. Anti-infective medicines	678	678	0	0	0	350	332	497	1.36	0	5,278	N
Pharmacy store	31215	Amoxicillin Capsule 250mg	E	9.2.1. Penicillins	23,798	21,889	1,910	0	17,890	4,302	5,707	2,553	6.57	0,668	16,202	N
Pharmacy store	31213	Amoxicillin Capsule 500mg	E	9. Anti-infective medicines	6,460	6,460	0	0	5,890	6,358	5,176	7,267	1.16	5,000	73,542	N
Pharmacy store	31213	Amoxicillin/Clauidic Acid Tablet 625mg	E	9. Anti-infective medicines	2,388	2,388	0	0	0	2,427	2,803	1,832	2.47	0	9,798	N
Pharmacy store	04017	Amoxicillin Injection 500mg	E	9. Anti-infective medicines	280	280	0	0	1,780	331	382	390	0.71	1,700	2,739	N
Pharmacy store	50044	Amoxicillin Liquid	E	9. Anti-infective medicines	115	115	0	0	0	41	41	52	2.21	0	907	N
Pharmacy store	31018	Amoxicillin Tablet	E	17.1. Antibiotics and Other Antiviral Medicines	3,588	3,588	0	0	0	668	490	416	8.41	0	1,472	N
Pharmacy store	89001	Anti-Hemorrhoidal Suppository	E	13.3. Anti-Inflammatory & Analgesics	72	21	51	0	0	15	12	4	3.5	0	51	N
Pharmacy store	78186	Antibacterial Emery Wheel Gel	N	12.3. Antiseptics	0	0	0	0	0	12	12	18	0	0	189	F
Pharmacy store	11003	APPR BODK	E	21.6. Miscellaneous Preparatory Items	0	0	0	0	0	0	0	0	0	0	2	N
Pharmacy store	31012	Aripiprazole 5mg Tablets	E	10.2. Anti-coagulants	2,660	0	2,620	0	0	117	50	50	5.44	0	426	N
Pharmacy store	31012	Aripiprazole 100mg	E	12.2. Anti-coagulants	26,470	26,470	0	0	19,890	5,897	4,992	5,565	5.12	19,800	18,338	N
Pharmacy store	31014	Aspirin Tablet 50mg	V	12.2. Anti-coagulants	3,668	443	3,157	0	0	197	444	106	4.43	0	754	N

Important Columns and their meaning :

- Stock on hand : This is your stock including expired or potentially un-usable stock.
- Expiring stock : mSupply looks into the future and predicts the quantity of stock that is likely to be wasted.
- Effective SOH : This is the Effective stock on hand. i.e `Stock on hand` - `Expiring stock`
- Effective Months of Stock : This is the months cover calculated using the `Effective SOH` value.
- Suggested order : This is the suggested order and will depend on `Effective SOH` and `Effective Months of Stock`

For a more detail guide click on this topic : [Stock wastage prediction for ordering](#).

## Suggest order quantities with prices and price extension

This report is an extension of the previous one, allowing you to see what the suggested order will cost. The filter choices you have are the same as for the suggested order quantities report. You get an



option to price your suggested order.

Key Column headers :

- Unit Price : Calculated via the latest price or by supplier quotes or using average prices received during the look back period. The `look back period` is the same setting that is used to calculate average monthly stock usages.
- Price extension (Suggested) : This is the predicted cost of a future order based on Unit Price.
- Annual consumption (quantity) : This is the predicted stock usage over a year based on the latest average monthly consumption.
- Annual consumption (cost) : Potential annual cost based on unit price.

Previous: [13.03. Transaction reports](#) | | Next: [13.05. Requisition reports](#)

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