10 Easy Steps to Clean Yeast (Washing and Reusing Yeast)
by Bill Nevits

Given the ever increasing cost of brewing ingredients, one has to consider ways to economize. One such way is to reuse yeast through multiple generations from brew to brew. This article describes a process for recycling yeast from one batch to the next through a technique called yeast washing. Yeast will be collected from the primary fermenter and washed making it useable for future brewing sessions.

The theory behind this article as well as many of the detailed process steps presented below come the Wyeast web site on a page that no longer seems to exist. This has been augmented by James Spencer's podcast interview of Chris Colby on 11/1/07 and my own personal experiences.

The first and most important requirement for recylcing yeast is the need for a finished beer ready to be racked out of the primary ferementer. Yeast can be harvested from any well made beer, but it never hurts to use a good one! You should avoid beers with conditions which can adversely affect yeast quality and viability such as, infections, off-tastes, incorrect fermentation temperatures and long lag times. There are also some camps who feel yeast harvesting from high gravity beers should be avoided as a result of the high alcohol levels can have on the yeast.

Step 1: Before starting the washing process, you will need to prepare three 1-quart Mason jars to aid in the process. Sterilize the Mason jars and their lids and fill them half full with boiling water. Seal the cover immediately and chill the three half-full jars of water to refrigerator temperature (approximately 38°F). Once the water in the jars is properly chilled, you can begin the washing process.

Step 2: Siphon all the beer you need from the primary fermenter into your secondary fermenter, bottling bucket or whatever you plan to put the beer into next. After removing all the beer you needed from the fermenter, pour or siphon off any remaining finished beer. If you are using a carboy, you might want to first sanitize the opening with either a lighter or a wipe with chlorine or alcohol.

Step 3: Pour the water from one of the quart jars into the fermenter. Swirl the water to agitate the yeast, hop residue and trub from the bottom.

Step 4: Pour contents from the fermenter back into the empty jar and replace the cover.

Step 5: Shake the jar well and then let it settle until three distinct layers start to form. This should take twenty to thirty minutes. Putting the jar in the refrigerator seems to help speed the process along.

The separation of layers may be difficult to see, but it will be become obvious in the next step.

Step 5 – First Wash

The figure at the right shows an example of the first jar after it has separated into three layers with the yeast suspended in the middle layer.

Step 6: This step requires pouring the suspended yeast into the second jar. Start by pouring off any clear liquid and floating hop particles in the top layer. If there isn't that much in the top layer, don't worry about pouring it off. Then carefully pour the suspended yeast layer into the second jar being careful to leave as much of the hops and trub behind as possible. It's hard to describe but it will be very obvious when you are done pouring off the yeast and the trub is left behind!

Note, you will have to make a judgment as to how much water should be in the second jar when you make the pour into it based on the size of the middle layer in the first jar. The object is to get the second jar relatively full while not losing any of the suspended yeast.

Step 7 – Second Wash

Step 7: Shake the second container to again get as much separation of yeast from particulate matter as possible. Allow contents to rest (about 1/2 hour to 1 hour) in the refrigerator and it will once again separate into three layers.

This time the layers will be more obvious than with the first jar!

The figure at the right shows an example of the second jar after it has separated into three layers with the yeast suspended in the middle layer.

Step 8: Like with the first jar, pour off any excess liquid and floating hop particles from the upper layer. Then pour the middle yeast layer in to the third jar.

Step 9: Put the third jar in the refrigerator. After a day or two, the yeast will settle into the bottom layer. The yeast is now washed and ready to use in the next brewing session.

Step 9 – Final Wash

The figure at the right shows an example of the third jar after the yeast has settled onto the bottom layer.

The washed yeast can now be stored for up to one month refrigerated. While normal refrigerator temperatures are fine, the more ideal storage temperatures are closer to 32°F (but not below 32°F).

Step 10: When its time to brew, you will be faced with the usual decision. Do you make a starter or not? If you chose to make a starter, pour off liquid from the top layer and add wort to make a starter the day before brewing (longer for bigger starters). If you

think there's enough yeast in the jar, you can simply repitch into a new brew straight away, however, if the yeast has been in storage for more than a couple weeks, you should probably consider a starter to re-energize it and achieve best results.

Step 10 - Washed & Ready

Whether or not you chose to make a starter, you will have to transfer your washed yeast to the next vessel. After pouring off the top layer of liquid, you may notice the yeast cake doesn't pour out of the mason jar all that well. You can scoop it out with a sterile spoon or use this trick. Create your starter medium and chill it to the desired temperature. Then pour a small amount into the mason jar, shake (and aerate well at the same time) and then pour back into the starter vessel.

Good luck, take a look at the photo album on the following pages, remember it's much easier than it sounds and, as always, relax and have a home brew.

Q&A

Can you really see the stratification of layers?
Yes, but sometimes it can be a bit. While the picture in step 5 is a typical example, this final picture is an exceptional example of the layers on the very first washing!

Step 5 - Exceptional Example

Why not just pitch on top of the yeast cake in the primary or secondary?
Timing is one reason – you need to be ready to brew the second beer when the first is ready to be transferred. The washing also removes the trub/hops and other beer residues in the fermenter which may not be the best for your beer. And it will be a big help if you're brewing a lighter or smaller beer the second tiem around.

How important is sanitation?
I'm from the sanitize but don't be insane school and haven't had any problems. Every transfer of the yeast increases the risk of infection so try to minimize them. That's why some encourage the scooping the yeast out of the fermenter with a spoon as opposed to the shake and pour method discussed here. You can also skip the third washing if you have good results after the first two.

How much is too much? Or how many times can I wash and reuse the yeast?
This is hard to say. I have reused some yeasts up to four times with no ill effects. You'll know when its time to stop when the performance starts to change.

1st mason jar, sterilized, half filled with boiled then cooled water

Primary fermenter after siphoning off into the secondary fermenter

Yeast and trub in primary fermenter after siphoning off surplus beer

Primary fermenter after adding water from the mason jar and carefully swishing around

Back in the 1st mason jar

After 30 minutes in the refrigerator

2nd mason jar after adding yeast from the first jar

What's left in the 1st jar

Another view of what's left in the 1st jar

2nd jar after another 30 minutes in the refrigerator

3rd mason jar after adding yeast from the second jar

What's left in the 2nd jar

Washed yeast in the 3rd mason jar two days later