Filtering Maple Syrup With a Cloth Filter
Filtration is a necessary and critical step in the production of syrup; you will improve the taste, clarity and possibly the color of your syrup. When sap is boiled, the minerals that are naturally present in the sap are concentrated or hardened into a substance called niter, commonly know as sugar sand. The filtering process allows you to remove the sugar sand. For many sugarmakers, especially the small scale producer, filtering can be one of the most daunting tasks of the sugaring process. You may find that your syrup filters differently from day to day and even from year to year. But with proper procedures, you can make the task manageable and get excellent results.

Filter Your Syrup HOT
The first rule in filtering is that the **syrup must be hot**. There are no shortcuts around this. It is best to filter syrup that has just been drawn off from the evaporator or finisher. As the syrup cools it begins to thicken and the filtering process is all but impossible. The world's best filtering equipment will not change this rule of nature: **maple syrup must be filtered hot.**

Have Patience
The second rule of filtering: **patience**. With the obvious exception of the filter press, the filtering process is not a task that is quickly completed. In fact, if your syrup runs quickly through your filter, you should be concerned. The syrup must work its way through and around the dense fibers of the filter fabric. If it can run through quickly, it is a sure sign that the filter fibers have been broken down and the filter is not doing its job! It's time to get a new filter.

So there's the problem: a good filter job takes time, but time means cooling syrup. Filtering and canning units, built to keep the syrup clean and hot during the filtering process, help resolve this problem. If you do not have a commercial filter tank, you should design a system that puts your filter inside a covered container. It also helps to filter larger batches so there is more mass to the hot syrup. Pour in your hot syrup, cover it to keep the heat inside, and be patient as the syrup oozes through the filter. Keep a thermometer near by; if the syrup cools below 180 degrees F during the filtering process, heat your syrup to the recommended 180 to 200 canning range. Care must be taken so that the syrup is not overheated, however. Syrup heated beyond the 200 degree F. mark is likely to produce more sugar sand and needs to be re-filtered.

Layer Pre-filters inside Final Filters
We recommend a two-layer filter system; place a pre-filter inside (or on top of) the final filter. A pre-filter is a thin fabric made of rayon cellulose, often referred to as "paper filters". The purpose of the pre-filter is to give an extra layer of filtering material and to keep the largest particles away from the "clean" final filter. This lets the final filter do a better job and reduces the number of cleanings required. The thinner, less expensive and easier to clean pre-filters can be changed easily and more often while the final filter is kept cleaner and can be used over a longer period. The bulk of your sugar sand should be caught in the pre-filter. Use the filters together, not as a 2-step process, to minimize heat loss. Don't be too concerned about built up sugar sand. If syrup is still moving through your filters, leave them alone; the sugar sand is a great filter bed.

Cone vs. Flat / Synthetic vs. Wool
The decision to buy Cone-shaped or flat filters will be determined by your filtering equipment. Cone filters are used in tall, covered filter tanks with hooks at the top to hold the filter "tabs." Flat filters are used in filter and canning units with flat wire racks, or in homemade colander/sieve operations. Flat filters are only available in synthetic fabrics. If you are using cones, you can choose from synthetic or wool, a matter of personal preference. The old-time traditional filter was made of wool; many still refer to them as a "hat" because they look like an old wool hat when turned upside down. Development of superior synthetic fibers over the past few decades, however, have led the vast majority of sugarmakers to switch to easy care synthetic filters, which lack the shrinkage and moth problems associated with wool.

Preparing and Cleaning Your Filter
We recommend that you soak the filter in hot water for a few minutes when using for the first time in a season. This ensures that the filters are clean and that they will not contaminate new syrup with old bacteria. Your filter will work a little better if dampened slightly in hot water (or hot sap) before use. With proper care, your filters can be used many times, even years. We recommend that you rinse your filters by turning them inside out and flushing them with hot water until the water runs clean. Never use soaps or detergents, which can flavor your syrup. Handle your filters carefully when cleaning; never twist, wring or stretch your filters, but gently squeeze the water out. Remember that the gentler you are with the bag or sheet the longer it will last and the better job it will do. We don't recommend machine washing, but your filters can be spun dry.