

The Chef Debrina Zen and Myths of Marinades or...

Ok let's debunk the myth of marinades.



Marinating at work

Above is a section of lean beef, about 1.25" thick. It was marinated for 18 hours in a basic marinade of 3/4 cup canola oil and 1/2 cup distilled vinegar with 1-tablespoon salt and 10 drops of green food coloring. So, as you can see the dye colored the surface quite thoroughly and went below the surface through a crack in the upper left. The meat has been discolored only very slightly about 1/8" at the top and 1/4" on the bottom. **NOTE:** The bottom got more exposure to the marinade because I did not turn the steak over night.

Marinades are thin liquids that foods swim in before cooking and they are bathed in myth and mystery. Unless they are heavy with salt, in which case they more properly are called **brines**, (**marinades do not penetrate meats like steak or lamb very far, perhaps no more than 1/8"**), even after many hours of soaking. Other meats, like chicken, turkey, and pork loin absorb a bit more marinade, while fish drink them up. Some other foods, especially eggplant and mushrooms absorb marinades rapidly. But many veggies are impermeable.

Nor do marinades tenderize red meat very much, especially since they do not penetrate very far and therefore cannot denature the protein bonds. **Marinades have another problem:** They keep the surface wet and can impede browning, and browned meat has more flavor. They can also impede crisping of the surface and If they contain sugar, they can burn and ruin the food if cooked hot and fast, like steaks and chops. Sugar is less of a problem for low slow roasting.

What marinades do best is find their way into cracks and crevices on the surface of meats making a flavorful baked on sauce. **So in general, I think it is best to think of marinades as a sauce.**

NOTE: I was taught that the best marinades usually contain four working components: **Salt, Oil, Flavoring & Acid**, and if you remember the acronym **SOFA**, you can create your own easily.

S is for Salt. Salt is important because it is a flavor enhancer and it is good at penetrating meat and pulling the other flavor components in the marinade by osmosis.

O is for Oil. Oils are used in marinades because many flavorings are not water soluble, and oils are needed to release their aromatics. Most green herbs are oil soluble. Oils on the surface of the meat aid in browning and crisping. Don't use olive oil because it solidifies at refrigerator temp. Use a corn, canola, or peanut oil. Other oils might work but give them thought because some, such as walnut, are very flavorful.

F is for Flavoring. Typical flavorings include herbs and spices such as oregano, thyme, cumin, paprika, garlic, onion powder, and even vegetables such as onion and jalapeño. It's a good idea to add some umami. That's the meaty flavor from glutamates found in **meat stocks, soy sauce**, and mushrooms.

A is for Acid. Acid can break down protein slightly. Typical acids are fruit juice (lemon juice, apple juice, white grape juice, pineapple juice, and orange juice work well), vinegar (cider vinegar, distilled vinegar, sherry vinegar, balsamic vinegar, raspberry vinegar, or any old vinegar), and even sugar free soft drinks.

MORE Tips:

Refrigerate. Keep the marinating meats in the fridge.

No Sugar: While you're concocting your signature marinade, skip the sugar. The big fat sugar molecules just thicken the liquid and clog up the pores in the meat. Keep your marinade thin. And sugar can burn if you cook hot.

No Alcohol: A lot of folks like to use wine, beer, and spirits in their marinades, but this may not be a good idea. Here's what the great Chef Thomas Keller says in his award winning **The French Laundry Cookbook**: *"If your marinating anything with alcohol, cook the alcohol off*

first. Alcohol doesn't tenderize; cooking tenderizes. Alcohol in a marinade in effect cooks the exterior of the meat, preventing the meat from fully absorbing the flavors in the marinade. Raw alcohol itself doesn't do anything good to meat. So put your wine or spirit in a pan, add your aromatics, cook off the alcohol, let it cool, and then pour it over your meat. This way you have the richness of the fruit of the wine or Cognac or whatever you're using, but you don't have the chemical reaction of 'burning' the meat with alcohol or it's harsh raw flavor."

Use a Nonreactive Container: The acids in a marinade can react with aluminum, copper, and cast iron, and give the food an "off " flavor. So do your soaking in plastic, stainless steel, porcelain, or best of all, zipper bags. Pour the marinade and meat in the bag and squeeze out all the air possible and the meat will be in contact on most surfaces. Put it in the fridge and flip it over frequently.

Here is a super neat Chef trick: Fresh pineapple has an enzyme called *bromelain* that tenderizes meat. This enzyme works fast. Within 30-60 minutes the meat is ready for the grill. Surprisingly, the pineapple adds little flavor to the meat in such a short time. **NOTE:** Some people like the softer meat, others feel it is mushy. You decide.

Also, the enzyme is destroyed by the canning and bottling process, **so be sure to use fresh pineapple**. Likewise, *papain* is an enzyme in papaya and the main tenderizing ingredient in Adolph's Meat Tenderizer. So...You can liquefy papaya or add smashed papaya to your marinade to tenderize.

OK Let's Cut to the chase. ...

Cut the surface of the meat with a knife about 1/8" deep every 3/4" or so or poke holes in it with a fork. The liquid will get into the cracks and that will help flavor it as well as help a bit with penetration.

Go "Nekkid": Chicken and turkey skin are almost all fat and they are an impenetrable barrier to marinades. If soaked, they only get soggy and won't crisp properly. So if the skin won't get crispy, what's the point? **Get rid of it. Just empty calories.** Skinless chicken will drink up more flavor. And it's healthier. And yes, you can get it crisp!!!

Save money. Some recipes call for marinating in barbecue sauce. **So please don't do it. It's just a waste of expensive sauce because it is too thick to penetrate very far.**

Warning: *Remember, all uncooked meat has microbes and spores. Used marinades are contaminated with raw meat juices so if you plan to use it as a sauce, it must be boiled for a few minutes.*

My Recipe for a great basic marinade: This is my standard marinade based on a wonderful, herby oil and vinegar salad dressing. I have added more salt to the dressing because it helps create the flavor-enhancing effect of a brine, and more vinegar because it's acid and also helps penetration. Best of all, it allows the flavor of meats and veggies to come through. I use it on pork, chicken, and even zucchini and eggplant.

My Basic Marinade:

2 cups My Italian Vinaigrette**
2 tablespoons kosher salt
1/4 cup distilled vinegar

Pour the vinaigrette, salt, and vinegar into a bowl, whisk, and pour into a bottle. In addition, this can be refrigerated for months. Shake well before using

****My Italian Vinaigrette Salad Dressing:**

Vinaigrettes are salad dressings and marinades made with vinegar and oil as a base. The classic ratio is 3 parts oil to 1 part vinegar, but you can vary it depending on your love or distaste for vinegar and what else goes in there...and a lot of things that can go in there. It is also common for most vinaigrette's to use many herbs and I use prepared mustard from the jar, not powdered, as an emulsifier, sort of a glue that helps hold oil and vinegar together and keeps them from separating rapidly. So, here is a super vinaigrette with lots of herbs, that I also use if as a base for marinades for use on all manner of meats and veggies. For use as a marinade for the Tuscan ribs I make a few minor additions, see below. **Yield:** 48 ounces.

3 cups vegetable oil (you can use olive oil, but it solidifies in the fridge)
1 cup red wine vinegar
1/3 cup inexpensive balsamic vinegar
8 large cloves garlic, pressed **Optional:** use **roasted garlic**
1 teaspoon sugar
2 teaspoons table salt
1/2 teaspoon ground black pepper
3 tablespoons Dijon-style mustard
3 tablespoons dried basil
3 tablespoons dried oregano

Pour into a bottle and shake well before using.

Pls. continue for.....

Some Additional Rules of Thumb:

Marinate fish for 30 to 60 minutes at most, depending on the thickness.

Chicken, turkey, and pork will begin taking on noticeable flavor in 2 to 3 hours, but 6 to 8 hours is pretty much optimal.

Sirloin and chuck steaks need 6 to 24 hours and benefit from scoring the surface.

The tenderest steaks, like filets and ribeyes, need only an hour or two.

Lamb tenderloins need only 15-30 minutes.

The more acidic the marinade, the less time needed.

Zipper or resealable bags are great for marinating and they need less liquid than bowls or Tupperware...and when you are done, you can throw them away. No cleanup. If you use pots, use stainless steel, glass, or ceramic. Never marinate in aluminum, cast iron, or copper. They react with the acids and salts.

Turn the meat every few hours.

Smaller pieces marinate faster, so consider cutting some meats into serving sizes.

REMEMBER...Always marinate in the refrigerator and cover the meat so it doesn't drip on other food. Never reuse marinades.