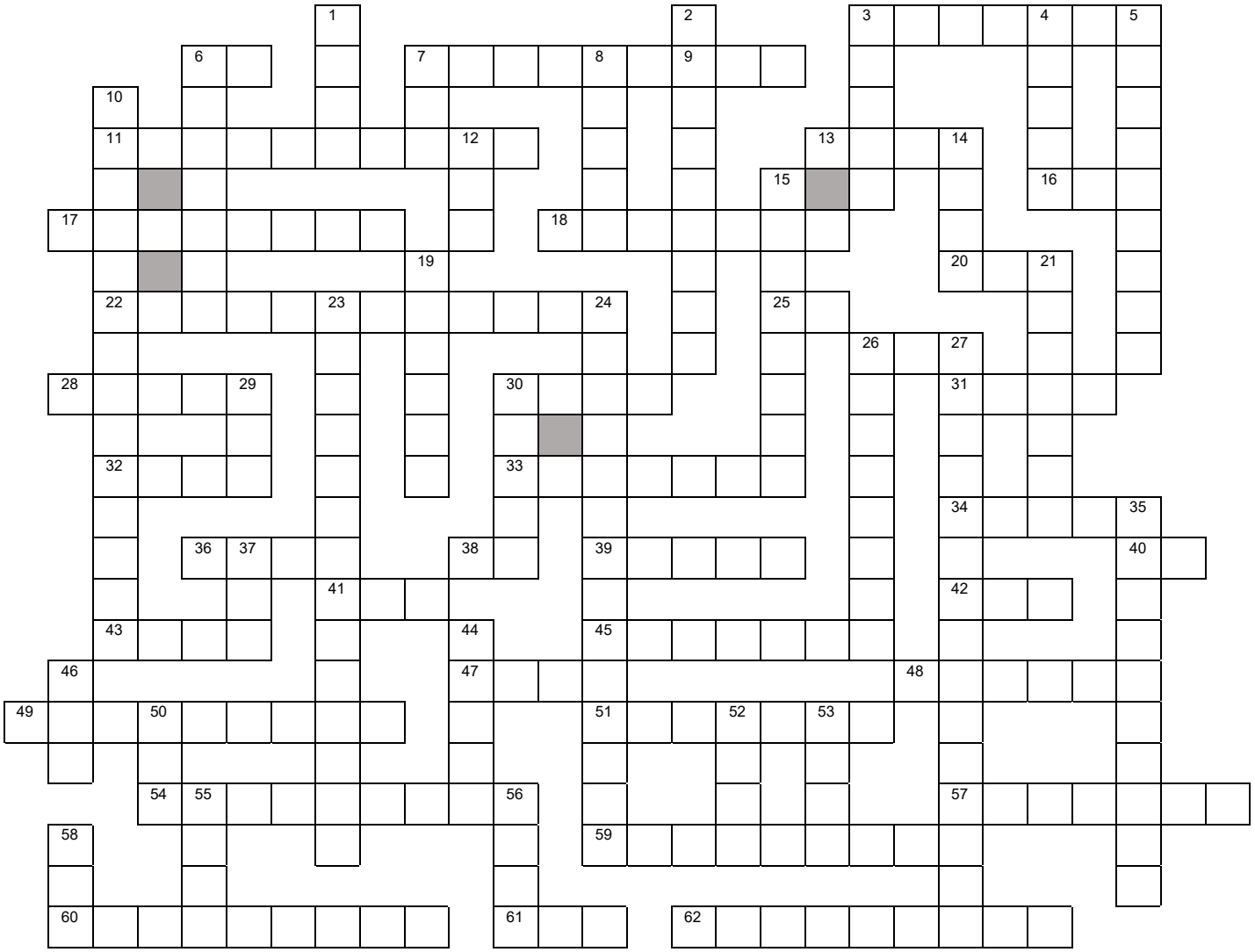
Soapmaking Crossword Puzzle



Across

3. Hot process soap is cooked at 75 _____ Celsius (or 167 _____ Fahrenheit).
6. Abbreviation for polypropylene, a heat-resistant and chemical-resistant plastic suitable for preparing lye solutions.
7. Author and editor of many soapmaking manuals published by the American Oil Chemists' Society, including *Soap Manufacturing Technology*. (First and last name)
11. Official FDA and INCI term for yellow, orange, red, brown, or black mineral pigments. (2 words)
13. Professional soapmakers ____ their livings making and selling soap.
16. Abbreviation for a concentrated plant extract known to contain the polyphenol antioxidants carnosic acid and rosmarinic acid; it is commonly added to soapmaking oils to prevent oxidation by free radicals.
17. Common name for a popular soapmaking herb, formerly known as *Rosmarinus officinalis*, until the Royal Horticultural Society in London recently changed the botanical name to *Salvia rosmarinus*.
18. Soapmaking tool with a broad, flat, blunt blade, used for mixing or stirring soap, scraping soap batter residue out of the bottom of a pot, or (for soapmakers who are soap guild members) voting.
20. Where Archimedes was when he discovered volume could be measured by displaced water and consequently shouted, "Eureka!"
22. The soap guild offers certification exams for demonstrating proficiency in making handcrafted products, including cold/hot process soap, melt and pour soap, ___ _____. (2 words)

25. Abbreviation for the southwestern state known for jojoba oil production.
26. When unsightly soda ash forms on soap, it usually forms where soap has been in contact with air, on the ___.
28. A valuable soapmaking oil, predominantly consisting of monounsaturated (C18:1) oleic fatty acid.
30. Soapmakers weigh their ingredients in grams and ounces; they don't measure ingredients by volume, such as ____ or quarts.
31. Homemade soap is made from scratch by ____.
32. Ultramarine mineral pigment powder was originally ground from lapis lazuli. Although now manufactured for safety and quality control, it is still the same deep, rich shade of ____.
33. The color institute founded in 1963 and responsible for cataloging colors to develop the first standardized color matching system.
34. Common name for dried *Iris germanica* rhizome powder, which is used in soapmaking as a plant-based fixative for volatile essential oils by first impregnating the powder with liquid essential oils and then adding the mixture to soap.
36. Elliott professor of chemistry at Hampden-Sydney College and author of both *Caveman Chemistry* and *Scientific Soapmaking*; his students conduct experiments involving soap. (First and last name)
38. Abbreviation for the northwestern state known for peppermint essential oil production.
39. Non-volatile base oils are said to be _____.
40. Abbreviation for the northwestern state known for meadowfoam seed oil production.
41. A color or shade, or a smart lighting system by Philips.
42. Many soapmakers make soap in a stainless steel ___.
43. If cold process soap does not go through gel phase, it may need to ____ for 6 weeks.
45. Sodium hydroxide is sometimes called _____ soda because it is corrosive.
47. A soapmaker who accidentally spills sodium hydroxide might shout, "____!" and suddenly stop everything to clean up the spill.
48. Add dry sodium hydroxide to water by carefully pouring it as a steady _____.
49. Monovalent anion consisting of 1 atom of hydrogen and 1 of oxygen. Soapmakers prefer the molecule produced when it is electrovalently bonded to Na^+ or K^+.
51. If it is necessary to _____ a saponification value, use a standardized concentration of potassium hydroxide dissolved in alcohol and follow the instructions in chapter 18 of *Scientific Soapmaking*, until the desired color change occurs.
54. Former soap guild president and author of *Soap & Cosmetic Labeling* and *Good Manufacturing Practices*. (First and last name)
57. A soapmakers should exercise caution by bending at the knees when _____ a heavy, 35-pound bucket of oil.
59. Optiphen MIT Ultra and _____ _ _ are the only preservatives for high-pH (pH 10) products, they are blends of methylisothiazolinone and phenoxyethanol, perfect for liquid soap, gel soap, and cream soap. (1 word and 2 letters)
60. Descriptive term for a type of natural oil usually obtained by distillation and having the characteristic odor of the plant from which it was extracted.
61. When selling internationally, website shopping carts automatically convert Japanese ___ to US dollars.
62. Whether scenting soap with essential oils, fragrance oils, or a combination of both, the FDA allows the use of the official term "_____" in the ingredient declaration of the product label.

DOWN

1. Common name for *Linum usitatissimum*, also known as linseed, the oxidized oil of which was used in making linoleum flooring as early as 1860.
2. The featured soapmaker for National Soapmaking Day is chosen from the soapmakers listed in the Natural Soap _____.
3. A step above self-printed labels but not as expensive as commercially-printed boxes, some soapmakers purchase printed stickers and affix a _____ to each bar of soap.

4. New soapmakers are often enthusiastic and ____ to make soap for the first time.
5. National Soapmaking Day is the last Sunday in _____.
6. After allowing enough time to not be rushed, donning personal protective equipment, and having an organized work area, a soapmaker may carefully _____ with safe soapmaking.
7. Sodium hydroxide is extremely hygroscopic and deliquescent; after weighing out the required amount, immediately replace the ___ to reduce damage from exposure to moisture in the air.
8. Use caution if cutting chunks of pre-made melt and pour soap base with a knife; it may be _____.
10. The French chemist who developed a process for manufacturing sodium carbonate from sea salt in 1791. (First and last name)
12. Don't ___ a soap cupcake!
14. "____ soap phase" is the true term for what soapmakers describe as "gel phase" or "Vaseline phase."
15. Both sodium and potassium hydroxide are basic, or _____, because they have a pH greater than pH 7.
19. In 1914, Otto Rohm, a _____ scientist, invented the first non-soap cleanser, also known as detergent. (Nationality)
21. This tool helps to speed the thickening of cold process soap and is a wand immersed into the soap.
23. Decade when soapmakers first arrived at the Jamestown colony in North America.
24. Chemical reaction occurring between an alkali salt and a fatty acid to produce soap.
26. Common name for *Curcuma longa*, a yellow rhizome known to stain plastic.
27. One drop of this solution will reveal if a soap is unsafe to use by changing color from clear to fuchsia.
29. One drop of lye solution in an ___ can cause blindness.
30. The dried coconut meat that is pressed to extract coconut oil.
35. Jackie Thompson's 2014 book, *Liquid _____: Tips, Techniques and Recipes for Creating All Manner of Liquid and Soft Soap Naturally!*
37. Purchasing exotic ingredients is a waste of money, unless the ingredients are put to ___.
44. A simple but popular coloring technique for cold process soap is the "in-the-pot _____."
46. To color soap, never use a ___, such as used for staining hair or fabric.
50. A soapmaker may have vivid dreams of soapmaking during the ___ stage of sleep.
52. By "natural," an un-regulated term, most soapmakers mean their ingredients are not fake; they are ____.
53. Most agree handmade soap is better ____ commercial soap.
55. Looney Tunes and Merrie Melodies star Wile E. Coyote purchases soap from the ____ Company.
56. Many soapmakers sell their products through this online global marketplace for unique and creative goods, whose labs and main offices are located in Brooklyn, New York.
58. To reduce steam, add these cubes to water before adding sodium hydroxide.