APISARA

SOAPMAKING GLOSSARY

Technical, scientific and professional vocabulary

From formulation to manufacturing and quality control

PURPOSE

A shared vocabulary makes it easier to learn, formulate, manufacture, control and teach soapmaking accurately. This glossary brings together essential artisan and professional terms in short, accessible and technically rigorous definitions.

165 terms arranged alphabetically. Cross-references under “See also” connect related concepts.

HOW TO USE THIS GLOSSARY

This is an orientation and revision tool. A short definition does not replace a full technical dossier, validated analytical method, Safety Data Sheet, supplier specification or applicable regulation.

Reading guide

Chemistry: fatty acids, triglycerides, saponification, alkalis, oxidation. Formulation: SAP values, water, superfat, additives. Processes: cold process, hot process, kettle, Melt & Pour. Quality: pH, free alkali, moisture, yield, stability. Production: batch, procedure, traceability, safety. Regulation: INCI, labelling, PIF and safety assessment.

Alphabetical index

A B C D E F G H I K
L M N O P Q R S T U
V W

A

Absorption of water

Ability of a soap or material to take up and retain water. In a solid bar, high water uptake can accelerate softening in humid conditions.

See also: Moisture; Solubility; Bar longevity.

Acid value

Analytical measure related to the amount of free fatty acids in a fat or oil, according to a defined method. It can help assess the condition or quality of an oil.

See also: Free fatty acid; Rancidity.

Activated charcoal

Porous carbon used, among other purposes, as a black colorant or adsorbent. Its quality and particle size should be suitable for the intended use.

See also: Natural colorant; Additive.

Active matter

Depending on context, the functional fraction of an ingredient or mixture. For commercial surfactants, it helps compare products containing different amounts of water.

See also: Surfactant; Formulation.

Additive

A substance added in addition to fats, alkali and water to modify colour, odour, texture, stability, processing or use properties.

See also: Colorant; Fragrance; Chelating agent.

Agitation

Controlled movement of the batch to promote homogeneity and heat transfer. At larger scale, efficiency depends strongly on vessel and agitator geometry.

See also: Kettle; Emulsion; Viscosity.

Alkali

A soluble base used to convert fatty acids into salts. In soapmaking, sodium hydroxide and potassium hydroxide are the most common.

See also: NaOH; KOH; Saponification.

Alkalinity

Capacity of a medium to neutralise acid. It is not automatically equivalent to pH and may be measured by titration.

See also: Titration; Free alkali; pH.

Allergen, fragrance

A fragrance substance subject, depending on jurisdiction and product, to assessment or labelling requirements. Applicable lists and thresholds must be checked in current regulations.

See also: Fragrance; IFRA; Labelling.

Antioxidant

A substance intended to slow oxidation of fats or other constituents. An antioxidant is not necessarily an antimicrobial preservative.

See also: Vitamin E; Oxidation; Preservative. B

B

Bar longevity

Length of use before a bar dissolves or wears away. It depends on hardness, solubility, formulation, cure and conditions of use.

See also: Solubility; Hardness; Cure.

Batch

A defined quantity of product manufactured under specified conditions and identified by a reference that allows traceability.

See also: Batch number; Batch manufacturing record.

Batch manufacturing record

Document describing and recording the actual manufacture of a batch: formula, materials, weights, steps, temperatures, deviations, controls and operator.

See also: Batch; Traceability; Procedure.

Batch number

A unique or sufficiently distinctive code linking a product to its manufacturing record and raw-material lots.

See also: Batch; Traceability.

Batch release

Documented decision authorising use, packing or sale of a batch after defined acceptance criteria have been checked.

See also: Quality control; Quarantine.

Batch yield

Relationship between product obtained and the amount expected under a defined calculation. It should be interpreted together with water and process losses.

See also: Material balance; Evaporation.

Butter, plant

Plant fat that is solid or semi-solid at room temperature, often rich in saturated fatty acids and/or stearic-oleic combinations depending on the species.

See also: Fat; Melting range. C

C

Caustic potash

Common name for potassium hydroxide, KOH. It is corrosive and requires the same risk-control principles as other strong alkalis.

See also: KOH; Potassium soap.

Caustic soda

Common name for sodium hydroxide, NaOH. It is strongly corrosive, hygroscopic and releases substantial heat when dissolved in water.

See also: NaOH; SDS; PPE.

Chelating agent

A substance able to form complexes with certain metal ions. In soapmaking this can help limit metal-related oxidation or deposits.

See also: Sodium citrate; Sequestering agent.

Citric acid

An organic acid used, among other purposes, to form citrates that can bind certain metal ions. Its use must be included in alkali calculations because it consumes alkali.

See also: Chelating agent; Sodium citrate; Lye adjustment.

Clay

Fine mineral material used as a colourant, filler or carrier. Composition, purity and suitability for cosmetic use should be known.

See also: Natural colorant; Additive.

Cleansing performance

Ability of a product to remove soil under defined conditions. Abundant foam is not a direct measure of cleansing performance.

See also: Detergency; Foam.

Cold process soapmaking

Method in which the soap batter is generally moulded after emulsification/trace and saponification continues without prolonged intentional cooking.

See also: Trace; Cure; Hot process soapmaking.

Colorant

A substance used to colour soap. Stability depends on pH, light, temperature and interactions with the formula.

See also: Pigment; Mica; Natural colorant.

Complexing agent

A substance that forms a complex with a metal ion. The term includes some chelating agents used to control metals and deposits.

See also: Chelating agent; Sequestering agent.

Concentration, lye

Mass percentage of NaOH in the NaOH + water solution. It differs from the water-to-lye ratio and affects viscosity, process speed and water to be evaporated.

See also: Water; Lye solution; Water-to-lye ratio.

Conservant / preservative

A substance intended to limit microbial growth in a product that requires preservation. Traditional solid soap with low water activity is not equivalent to an aqueous cosmetic emulsion.

See also: Antioxidant; Water activity.

Cross-contamination

Unwanted transfer of material, residue, fragrance, allergen or contamination from one product, item of equipment or area to another.

See also: Cleaning; GMP.

Crystallisation

Progressive organisation of solid phases. In soap, changes in crystalline structure contribute to physical evolution during curing.

See also: Cure; Hardness.

Cure

Period after manufacture during which solid soap loses water and its physical structure evolves. It commonly improves hardness, longevity and consistency in use.

See also: Drying; Moisture; Bar longevity.

Cutting

Operation of dividing a soap block into individual bars. The best timing depends on hardness, formula, water and process.

See also: Unmoulding; Cure. D

D

Demineralised water

Water from which much of the mineral-ion content has been removed. It can improve reproducibility compared with water of unknown composition.

See also: Hard water; Chelating agent.

Detergency

Ability to promote removal of soil, particularly oily soil, through surfactant action and washing conditions.

See also: Surfactant; Micelle; Soap.

Deviation

Difference between what was specified in a formula/procedure and what actually occurred. It should be recorded and assessed for impact.

See also: Non-conformity; Traceability.

DIP / PIF

Product Information File required for cosmetics in certain jurisdictions, notably the European Union. Its content and obligations must follow the applicable law.

See also: Regulation; Safety assessment.

Dissolution

Process by which a substance passes into a solvent. For soap, dissolution rate in water affects consumption, feel and longevity.

See also: Solubility; Bar longevity.

DOS

Common abbreviation for “dreaded orange spots”, orange discolourations associated with localised oxidation of fats in soap. It is not a standard analytical term.

See also: Oxidation; Rancidity; Antioxidant.

Drying

Progressive loss of water after manufacture. It is an important component of curing solid soap.

See also: Cure; Moisture; Evaporation. E

E

EDTA

A chelating agent used in some formulations to bind metal ions. Its chemical form and use must suit the formula and applicable regulations.

See also: Chelating agent; Sequestering agent.

Electrolyte

A substance that forms ions in solution. Sodium chloride is an important electrolyte in some soap processes and can alter soap solubility.

See also: Salting-out; Sodium chloride.

Emollient

A substance used to improve the sensation of skin softness. In a rinse-off soap, its role and related claims should be assessed cautiously.

See also: Superfat; Claim.

Emulsion

Intimate dispersion of two initially immiscible phases. In cold process soapmaking, formation of a stable emulsion normally precedes visible trace.

See also: Trace; False trace; Phase separation.

Emulsion, stable

State in which oil and aqueous phases remain sufficiently dispersed for saponification to continue without immediate macroscopic separation.

See also: Emulsion; Stick blender.

Essential oils

Volatile aromatic mixtures obtained from plant materials. Natural origin does not remove use limits, sensitisation potential or labelling duties.

See also: Fragrance; Fragrance allergen.

Evaporation

Loss of water or other volatile compounds to the atmosphere. It affects mass, concentration, texture, yield and drying time.

See also: Material balance; Cure.

Exothermic

Describes a transformation that releases heat. Dissolving NaOH in water and saponification can both contribute to temperature rise.

See also: Lye solution; Temperature. F

F

False trace

Thickening that resembles trace although a sufficiently stable emulsion has not formed, often promoted by cooling or solidification of hard fats.

See also: Trace; Emulsion; Melting range.

Fat / oil

Material composed mainly of triglycerides and other lipid constituents, used as a source of fatty acids for saponification.

See also: Oil; Plant butter; Triglyceride.

Fatty acid

Long-chain carboxylic acid that forms much of oils and fats in esterified form. Fatty-acid profile influences hardness, solubility, foam and soap behaviour.

See also: Fatty-acid profile; Triglyceride; Soap.

Fatty acid, free

A fatty acid not esterified to glycerol. Its level may rise in hydrolysed or aged fat and can also be measured to characterise some processes.

See also: Acid value; Hydrolysis; Fat.

Fatty-acid profile

Distribution of the principal fatty acids in an oil, blend or soap. It helps explain trends in hardness, foam, solubility and oxidation.

See also: Fatty acid; Formulation.

Foam / lather

Gas dispersed in liquid and stabilised by surfactants. Volume, bubble size, stability and feel depend on formulation and conditions of use.

See also: Lauric acid; Stearic acid.

Foam stability

Ability of foam to persist before collapsing. It depends on soap composition, water, concentration and test conditions.

See also: Foam; Foaming ability.

Foaming ability

Ability of a product to generate foam under defined conditions. It should not be confused with cleansing performance.

See also: Foam; Detergency.

Formula

Defined quantitative composition of a product. A professional formula is version-controlled and is more than a simple ingredient list.

See also: Recipe; Batch manufacturing record.

Fragrance

A mixture of odoriferous substances, natural and/or synthetic, added to perfume a product. Compliance depends on dose, composition and applicable regulation.

See also: IFRA; Essential oils; Fragrance allergen. G

G

Gel phase

Hotter, often more translucent state that can occur in some cold-process soaps as the mass heats. It may affect appearance and some colours.

See also: Cold process; Temperature.

Glycerin / glycerol

Polyol formed during saponification of triglycerides. In artisan processes without phase separation it generally remains in the soap.

See also: Triglyceride; Salting-out.

Glycerin soap base

Common commercial name for many Melt & Pour bases, often formulated to be transparent or readily remelted. They are not made of glycerin alone.

See also: Melt & Pour; Glycerin.

Good Manufacturing Practices (GMP)

Organised practices intended to keep manufacture under control: personnel, premises, hygiene, documentation, materials, production, control and deviation management.

See also: Traceability; Procedure; Batch. H

H

Hard water

Water rich particularly in calcium and magnesium ions. These ions can form poorly soluble salts with soap and create deposits.

See also: Soap scum; Sequestering agent.

Hardness

Mechanical resistance of a soap bar to deformation or wear. It depends on formulation, water, crystalline structure and drying time.

See also: Cure; Palmitic acid; Stearic acid.

Heating

Controlled supply of thermal energy to a process. It should avoid local hot spots and remain compatible with materials, equipment and safety.

See also: Temperature; Kettle.

Hot process soapmaking

Process in which heat is intentionally maintained to accelerate and conduct much of saponification before final forming.

See also: Cold process; Kettle.

Humidity / moisture

Amount of water present in a material or soap according to a defined measurement method. It influences mass, hardness, storage and use behaviour.

See also: Cure; Volatile matter.

Hydrolysis

Chemical cleavage involving water. In fats it can release free fatty acids from triglycerides.

See also: Free fatty acid; Triglyceride.

Hygroscopic

Able to absorb moisture from air. NaOH and KOH are strongly hygroscopic, affecting storage, effective purity and weighing.

See also: Caustic soda; Storage. I

I

IFRA

International Fragrance Association, which publishes standards for use of many fragrance materials. Supplier IFRA documentation must be interpreted for the correct use category and does not replace local law.

See also: Fragrance; Regulation.

INCI

International Nomenclature of Cosmetic Ingredients used for declaring cosmetic ingredients in many regulatory systems. Names and ordering must follow applicable rules.

See also: Labelling; Regulation.

Iodine value

Measure of the overall unsaturation of a fat or oil. It can help characterise an oil but does not alone predict soap quality or stability.

See also: Unsaturation; Oxidation. K

K

Kettle

Heated vessel used to conduct soap manufacture. The term alone does not define the process: mass cooking, salting-out and other variants exist.

See also: Hot process; Salting-out; Agitation.

KOH

Chemical formula for potassium hydroxide. Commercial purity must be taken into account in calculations.

See also: Potassium hydroxide; Purity. L

L

Labelling

Information carried on packaging according to product type and applicable law: identity, quantity, ingredients, precautions, responsible person, batch and other required particulars.

See also: INCI; Batch; Regulation.

Lauric acid

Saturated C12:0 fatty acid found especially in lauric oils. It contributes rapid foam and high soap solubility, while high levels can alter mildness in use.

See also: Coconut oil; Foam; Solubility.

Linoleic acid

Polyunsaturated C18:2 fatty acid. It often favours softer soaps, while its high unsaturation increases susceptibility to oxidation.

See also: Oxidation; DOS; Unsaturation.

Linolenic acid

Polyunsaturated C18:3 fatty acid that is particularly oxidation-sensitive. High levels require careful attention to oil freshness and storage.

See also: Antioxidant; Oxidation; Iodine value.

Loss on drying

Mass decrease measured after exposure to defined drying conditions. Depending on the method, it may estimate water plus other volatile compounds.

See also: Volatile matter; Moisture.

Lye adjustment

Calculated modification of alkali quantity to account for an added acid, different alkali purity or another quantifiable factor. It should not be improvised.

See also: Citric acid; NaOH purity.

Lye discount

Calculated reduction in alkali compared with the theoretical saponification requirement. It is frequently used to create superfat.

See also: Superfat; Superfat level.

Lye solution

Aqueous solution of NaOH or, more generally, alkali used for saponification. Its concentration and composition should be known and documented.

See also: Alkali solution; Lye concentration. M

M

Material balance

Quantitative comparison of incoming materials, product obtained, losses, evaporation and separated phases. It helps explain yield and anomalies.

See also: Yield; Evaporation; Kettle.

Maturation

General term for soap evolution after manufacture. For solid soap it includes drying and physical reorganisation.

See also: Cure; Drying.

Melt & Pour

Pre-manufactured soap or cleansing base designed to be melted, customised and remoulded. The user generally does not perform the original saponification.

See also: Glycerin soap base; Saponification.

Melting point / range

Temperature or range over which a material becomes liquid. Natural fats are mixtures and therefore often have a melting range rather than one sharp point.

See also: False trace; Plant butter.

Mica

Lamellar mineral used as a pigment carrier or for visual effects. Coloured micas are not necessarily exclusively mineral in origin or permitted for every use.

See also: Colorant; Pigment.

Micelle

Organised aggregate of surfactant molecules or ions in solution under suitable concentration conditions. Micelles help disperse hydrophobic material in water.

See also: Surfactant; Detergency.

Mixing

See Agitation. Effective mixing must move the whole batch rather than only the visible surface.

See also: Agitation; Kettle.

Moisture

See Humidity / moisture. The reported value always depends on the measurement method used.

See also: Cure; Volatile matter.

Myristic acid

Saturated C14:0 fatty acid contributing to hardness, foam and detergency in some soaps.

See also: Saturated fatty acids; Foam. N

N

NaOH

Chemical formula for sodium hydroxide, the principal alkali used for solid sodium soaps. Calculations should account for actual purity where relevant.

See also: Sodium hydroxide; Lye calculation.

Natural colorant

Material of natural origin used for colouring, such as clay, plant material or charcoal. “Natural” does not guarantee stability, safety or regulatory compliance.

See also: Colorant; Clay; Activated charcoal.

Non-conformity

Failure to meet a requirement, specification or procedure. It should be identified, assessed and dealt with before release when relevant.

See also: Deviation; Quarantine. O

O

Oleic acid

Monounsaturated C18:1 fatty acid common in vegetable oils. It generally gives milder soaps with less immediate foam and hardness that develops during curing.

See also: Olive oil; Cure; Unsaturation.

Olive oil

Oil generally rich in oleic acid. It can give initially softer, lower-foaming soaps whose properties evolve during cure.

See also: Oleic acid; Cure.

Oxidation

Reactions that can alter lipids and generate odours, colours or degradation products. Oxygen, heat, light and some metals can accelerate them.

See also: DOS; Rancidity; Antioxidant.

Oxidation, primary

Early stages of lipid oxidation, often involving hydroperoxide formation. Measurement requires appropriate analytical methods.

See also: Oxidation; Rancidity. P

P

Palmitic acid

Saturated C16:0 fatty acid contributing to hardness, bar structure and a creamier lather.

See also: Hardness; Stearic acid.

pH

Logarithmic quantity related to hydrogen-ion activity in an aqueous phase. Measurement is strongly method-dependent; pH alone does not directly measure free alkali in soap.

See also: Free alkali; Alkalinity.

Phase separation

Visible separation of components that should form a homogeneous mass. During manufacture it may indicate a broken emulsion, inadequate mixing or a formulation problem.

See also: Emulsion; False trace.

Pigment

Coloured particulate material generally insoluble in the medium in which it is dispersed. Its behaviour differs from a soluble dye.

See also: Colorant; Mica.

Potassium hydroxide

Strong alkali used mainly for more soluble potassium soaps, often formulated as pastes or liquids. It is corrosive and hygroscopic.

See also: KOH; Potassium soap.

Potassium soap

Soap in which fatty acids are mainly present as potassium salts. It is generally more soluble than the corresponding sodium soap.

See also: KOH; Caustic potash.

PPE

Personal protective equipment such as suitable eye/face protection, gloves, protective clothing and footwear. PPE complements but does not replace safe organisation and engineering controls.

See also: Risk assessment; Caustic soda.

Preservative

See Conservant / preservative. Preservation needs must be assessed from the actual product, water activity, packaging and use conditions.

See also: Water activity; Antioxidant.

Primary oxidation

See Oxidation, primary.

See also: Oxidation; Rancidity.

Procedure / SOP

Controlled document describing how to perform an operation. In production it supports safety, reproducibility and training.

See also: GMP; Batch manufacturing record.

Product Information File (PIF)

See DIP / PIF.

See also: Regulation; Safety assessment.

Purity

Actual proportion of the substance of interest in a commercial raw material. For NaOH and KOH, purity directly affects alkali calculation.

See also: NaOH purity; KOH. Q

Q

Quality control

Defined checks used to verify that materials, process and product meet established criteria.

See also: Specification; Batch release; Sampling.

Quarantine

Status of a material or batch kept separate while awaiting a decision, test or investigation. A doubtful product should not be released by default.

See also: Batch release; Non-conformity. R

R

Rancidity

Deterioration of fats, often involving oxidation and/or hydrolysis, that can produce off-odours and other quality defects.

See also: Oxidation; DOS; Free fatty acid.

Reaction completion

Expression to use cautiously: in a complex matrix, the practical end of a process should be defined by measurable criteria rather than visual certainty alone.

See also: Saponification; Quality control.

Recipe

Practical instructions and quantities for making a product. In professional work it should be converted into a controlled formula and versioned manufacturing documentation.

See also: Formula; Procedure.

Regulation

Legal requirements applicable to product, manufacture, safety, labelling and placing on the market in a given jurisdiction.

See also: INCI; Labelling; PIF.

Reproducibility

Ability to obtain consistent results when a process is repeated under defined conditions. It depends on measurements, procedures and controlled materials.

See also: Procedure; Traceability.

Retention sample

A sample kept from a batch so its appearance, odour or other characteristics can later be re-examined under a defined procedure.

See also: Batch; Traceability.

Risk

Combination of likelihood and severity of harm in a given situation. The same hazard can present different risks depending on exposure and controls.

See also: Hazard; Risk assessment.

Risk assessment

Structured process of identifying hazards, evaluating exposure situations and defining preventive and control measures.

See also: Hazard; PPE; Procedure. S

S

Safety

Organisation intended to prevent harm from chemicals, heat, equipment, manual handling and the working environment.

See also: PPE; SDS; Risk assessment.

Safety assessment

Assessment performed under the applicable regulatory framework to determine cosmetic product safety under intended conditions of use.

See also: PIF; Regulation.

Salting-out

Operation that alters soap solubility, often using sodium chloride, to promote separation of a soap-rich phase from an aqueous phase.

See also: Kettle; Glycerin; Electrolyte.

Sampling

Method of taking a sample intended to represent the material or batch. It becomes especially important in large vessels or heterogeneous products.

See also: Quality control; Kettle.

SAP value

Value used to calculate theoretical alkali requirement for a fat or oil. It is essential to check whether a value is expressed for KOH or directly for NaOH.

See also: Saponification value; Lye calculation.

Saponifiable

A fraction or substance capable of reacting with alkali to form, among other products, fatty-acid salts under the conditions considered.

See also: Unsaponifiables; Saponification.

Saponification

Reaction of saponifiable fats with alkali to form fatty-acid salts—soap—and, for triglycerides, glycerol.

See also: Triglyceride; Alkali; Soap.

Saponification value

Amount of alkali required, under a stated convention, to saponify a defined mass of fat. Actual values vary with material and lot.

See also: Lye calculation; Alkali purity.

SDS

Safety Data Sheet providing information on hazards, handling, storage, first aid, exposure controls and disposal for hazardous substances or mixtures.

See also: Caustic soda; Safety.

Sequestering agent

Substance that binds certain metal ions and reduces their availability to form deposits or catalyse reactions.

See also: Chelating agent; Sodium citrate.

Soap

Salt of a fatty acid. In everyday use the word also refers to the formulated product containing these salts together with glycerin, water and other constituents.

See also: Saponification; Surfactant.

Soap scum

Poorly soluble deposit formed particularly when calcium or magnesium ions in hard water react with soap.

See also: Hard water; Chelating agent.

Soda ash

Whitish sodium-carbonate deposit that may form on the surface of soap. It is usually mainly cosmetic but should be distinguished from a genuinely caustic defect.

See also: Sodium carbonate; Surface.

Sodium carbonate

Alkaline salt that can form on soap surfaces when sodium hydroxide reacts with carbon dioxide in air. It is associated with “soda ash”.

See also: Soda ash; NaOH.

Sodium chloride

NaCl. In soapmaking it can alter solubility and hardness and is important in some salting-out processes.

See also: Salting-out; Electrolyte.

Sodium citrate

Salt of citric acid that can act as a chelating/sequestering agent. When produced from citric acid and NaOH, its alkali consumption must be included in calculations.

See also: Citric acid; Lye adjustment.

Sodium hydroxide

Strong alkali commonly used to make solid soap. It is corrosive and hygroscopic and must be weighed and handled under rigorous safety procedures.

See also: NaOH; Caustic soda.

Sodium oleate

Sodium salt of oleic acid and a possible major component of soaps rich in oleic oils.

See also: Oleic acid; Soap.

Sodium palmitate

Sodium salt of palmitic acid, generally contributing to soap structure and hardness.

See also: Palmitic acid; Soap.

Sodium soap

Soap consisting mainly of sodium salts of fatty acids, generally harder and less soluble than the corresponding potassium soap.

See also: NaOH; Potassium soap.

Sodium stearate

Sodium salt of stearic acid, generally associated with soap hardness and structure.

See also: Stearic acid; Soap.

Solubility

Extent or ease with which a substance dissolves in a given medium. High soap solubility can increase consumption under running water.

See also: Dissolution; Bar longevity.

Specification

Criterion or set of criteria defining expected characteristics of a raw material, packaging component, intermediate or finished product.

See also: Quality control; Batch release.

Stearic acid

Saturated C18:0 fatty acid that generally increases hardness and foam stability. High proportions can accelerate batter thickening.

See also: Trace; Hardness; Foam.

Stick blender

Immersion blender used to accelerate dispersion and emulsification in small-batch production. Excessive use can thicken batter too quickly or incorporate air.

See also: Emulsion; Trace.

Storage

Conditions used to preserve materials and products: temperature, light, humidity, closure, segregation of incompatibles and stock rotation.

See also: Oxidation; Traceability.

Superfat

Unsaponified fatty material intentionally left through formulation or resulting from alkali reduction. One should not assume a particular oil remains wholly unsaponified without evidence.

See also: Lye discount; Superfat level.

Superfat level

Chosen degree of alkali reduction relative to theoretical saponification requirement, or equivalent process strategy.

See also: Superfat; Lye discount.

Surfactant

Molecule or ion with hydrophilic and hydrophobic regions, able to modify interfaces and contribute to cleansing, foaming or emulsification.

See also: Soap; Micelle; Detergency.

Syndet

Solid cleansing product formulated mainly with surfactants other than fatty-acid soaps. Its chemistry and pH may differ greatly from traditional soap.

See also: Surfactant; Soap. T

T

Temperature

Major process variable influencing melting, viscosity, reaction rate, volatility and safety. A temperature value must be interpreted with process and measurement location.

See also: Exothermic; Kettle.

Titration

Quantitative analytical method based on reaction with a solution of known concentration. It can measure acidity, alkalinity and other parameters depending on the protocol.

See also: Alkalinity; Free fatty acid.

Trace

Visible thickening after emulsion formation in soapmaking. It is a process indicator, not a direct measurement of complete saponification.

See also: Emulsion; False trace; Cold process.

Traceability

Ability to reconstruct the history of a product, its materials, manufacture, controls and destination through linked records.

See also: Batch; Batch manufacturing record; Batch number.

Triglyceride / triacylglycerol

Molecule consisting of glycerol esterified with three fatty acids. It is the principal component of many saponifiable oils and fats.

See also: Glycerin; Fatty acid; Saponification. U

U

Unmoulding

Removal of soap from its mould once cohesion is sufficient. Premature unmoulding may deform or tear the product.

See also: Cutting; Hardness.

Unsaponifiables

Fraction of a fat or oil that does not form soap under usual saponification conditions, including sterols, hydrocarbons and some pigments.

See also: Fat; Saponification.

Unsaturation

Presence of one or more carbon-carbon double bonds in a fatty-acid chain. Greater unsaturation generally increases oxidation sensitivity.

See also: Iodine value; Linoleic acid. V

V

Viscosity

Resistance of a fluid or paste to flow. During manufacture it changes with temperature, water content, composition and process progression.

See also: Trace; Temperature.

Vitamin E / tocopherol

Common name for tocopherols used particularly as lipid antioxidants. They can slow some oxidation but do not replace antimicrobial preservation.

See also: Antioxidant; Oxidation.

Volatile matter

Fraction lost under the conditions of a defined analytical method, often mainly water in soap but not necessarily water alone.

See also: Moisture; Evaporation. W

W

Water activity (aw)

Measure of how available water is for reactions and microbial growth. It is different from total water content.

See also: Moisture; Preservative.

Water-to-lye ratio

Mass ratio of water to NaOH. It describes the same water/alkali relationship as lye concentration in another form, but the numerical values are not interchangeable.

See also: Lye concentration; Water.

Weighing

Measurement of mass. For critical soapmaking ingredients, weighing is more reproducible than volumetric measurement.

See also: Scale; Batch manufacturing record.

Weighing area

Organised space for weighing materials while reducing errors, contamination, identity mix-ups and operator exposure.

See also: Weighing; GMP.

Working temperature

Temperature range chosen for a particular operation such as melting, mixing, fragrance addition or pouring. It must suit formula and process.

See also: Temperature; Melting range.

Using this glossary with the Apisara collection

The glossary is a gateway to the wider collection. When a term requires more detail, consult the corresponding Apisara dossiers on fatty acids, lye and saponification, water, superfat, trace, curing, hardness and longevity, foam, oxidation, oils and butters, additives, safety, cold process, hot process, kettle soapmaking and related subjects.

IMPORTANT PRINCIPLE

A technical term only has value in context. For example, alkaline pH is normal for traditional soap; “trace” does not prove that saponification is complete; an antioxidant is not automatically a preservative; and a generic SAP value remains an average value.

Apisara resources

In addition to the saponification calculator, the dossiers and technical sheets available on apisara.org form a free knowledge base for hobbyists, artisans, professionals and trainers. Articles published on Substack and Facebook complement these resources.

apisara.org - Apisara website and resources Substack - in-depth articles and technical dossiers Facebook - educational publications and Apisara news

Licence and use

Eric Bertrand for Apisara - Version 1.0 - 1 October 2026

Creative Commons Attribution-NonCommercial (CC BY-NC). You may share and adapt this document with attribution, subject to the conditions of the licence.

Disclaimer: this guide is educational material. It does not replace laboratory analysis, an SDS, supplier specifications, a cosmetic safety assessment, or the regulatory obligations applicable to the product and country.