The Ultimate How-to Guide to making Perfume
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Introduction

From the Ancient Egyptians to the tales told from religions, humans have always wanted to enhance their scent, emulating the smells of nature. Not only does Perfume, or “fragrance of the gods,” have an intimate history with mankind, but it is also a global market that is projected to reach US$92 billion by the year 2024.

Who is this How-To Guide designed for?

This comprehensive eBook is designed to suit anyone looking for detailed information on how to create perfume, or more facts and insights into the perfumer’s world. Packed with relevant business information and helpful how-to’s, this guide will assist anyone wanting to:

1. Start a Perfume Business
2. Learn how Perfume is made
3. Learn how to formulate your own fragrances and scents
4. Learn what ingredients perfumes are crafted from
5. Learn how to create a homemade perfume
6. Learn about the history of perfume

Anyone with the slightest interest in fragrances or perfumery can create a signature scent. Not only will you learn how to master the art of creating perfume, but the lessons learnt can be applied to a range of scented crafts; including room diffusers, cosmetics, and advanced perfumery.

This fascinating craft will push you to explore new senses and sensations, and the satisfaction of blending your ideas to perfume perfection makes this a rewarding interest! Read on to discover!
Perfume began with the ancient Egyptians, where it influenced the Romans, then the Greeks, and onwards to the Oriental kingdoms. It was only when 13th century Crusaders bought back samples to Italy, France and England that new and innovative methods and ingredients would lead to our contemporary perfumes. The below timeline gives interesting insights into the progress of perfume, which was crafted out of periods of strife and innovation in his Natural History, that we can recreate these scents in our modern times.

1200 BCE | Mesopotamia
A woman named Tapputi was the first recorded chemist, with her existence found on a 1200 BC Cuneiform tablet in Babylonian times. She was a powerful member within the Mesopotamian government and religion as overseer of the Royal palace. She developed methods for oil and scent extraction as the basis for perfume crafting, with her ground-breaking techniques in solvents pushing the craft forward.

Ancient Egypt
The Ancient Egyptian wealthy families begin wearing and enthusiastically adopting perfumes, using the scents for religious and beautification purposes. Fragrances were thought to be the sweat of the Sun-God, Ra. Nefertum, the God of Fragrance, even wore a head dress made of water lilies, an iconic perfume ingredient of the time. The Ancient Egyptians also had complex recipes, formulas and apparatus for perfumery, and imported vast amounts of ingredients from Punt, in Africa, indicating international trade relations at play.
 ANCIENT PERSIA
The Ancient Persians were huge stakeholders in perfume and dominated the trade for hundreds of years. The Persian Muslim doctor and chemist Avicenna (also known as Ibn Sina) is thought to have introduced the process of extracting oils from flowers by means of distillation, the procedure most commonly used today, and was first to figure out the chemistry behind perfumes that weren’t oil-based.

ANCIENT ROME
The oldest perfumery factory, and the mythical home to the Goddess of Love, Aphrodite, was discovered in Cyprus in 2007. Archaeological teams unearthed an enormous factory that existed 4,000 years ago during the Bronze Age. It was over 4,000m², indicating perfume making on an industrial scale for the temples and the people. It is estimated that by 100 AD, Ancient Romans were using 2,800 tons of frankincense a year! There are so many perfume recipes from the ancient Romans and Greeks, carefully penned by people like Pliny the Elder in his Natural History, that we can recreate these scents in our modern times.

MEDIEVAL EUROPE
After the Holy Wars in Arabia, and the already blossoming perfume industries of other lands, Crusaders bought the concept of perfume with them on their return. The wealthy of the time carried Pomanders, a ball of scented material kept in a beautiful open case that was meant to ward off infections and ‘bad air.’ Here, the first alcohol-based perfume was created. Known as Hungary Water, as it is believed to have been crafted for the Queen Elizabeth of Hungary in 1370, using distilled alcohol and herbs.

1400-1500s | ITALY
Medieval Italy was the home to the modern-day liquid perfume. After the breakthrough discovery of aqua mirabilis, which was a clear substance made of 95 percent alcohol and imbued with strong scent. Eureka- modern day perfume! After this, Venice became the centre of the world trade in perfume for hundreds of years. However, it is Catherine de Medici, an Italian bride wed to the French king, who is credited with bringing perfume to France, England and the rest of the world.

1800’s to Modern Day
By the late 1800’s, synthetic compounds were being discovered, and the modern perfume industry was born.
The Basics of Fine Fragrance

Fragrance and Perfume Basic Information

Perfume is a product of the extracted oils of plants and flowers with a base solvent, such as alcohol. Loved from as early as 3000 BCE, the captivating scents of nature evoke emotions and memories that our other senses can't grasp. Our emotional ties to the smells that surround us often make perfume 'liquid memories.'

Perfume Classifications
There are 3 basic categories into which perfumes are classified:

1. The **concentration** or dilution level of the essential oils to alcohol solvent
2. The **scent** family to which it belongs
3. The **notes** of the scent

Perfume Concentrations
What is the difference between Perfume, Eau de Parfum, Eau de Toilette and Eau de Cologne?

The different names for the types of perfume refer to the concentration of perfume oil to alcohol. Perfume oils are extremely intense, toxic and concentrated, so it needs to be distilled using alcohol as the base.

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Fragrances need 3 notes to keep the perfume well-rounded and long-lasting

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**Eau de Cologne**
Between 2-5% Perfume oil in alcohol and water, this concentration is the most diluted and last for 2 hours

**Eau de Toilette**
Between 4-10% Perfume oil in alcohol, this is a light spray composition and lasts for about 3 hours.

**Perfume, Parfum or Extrait**
15-25% Perfume oil has the highest fragrance concentration and is the most expensive. Not always suitable for dry or sensitive skin, but usually lasts 8-24 hours.

**Eau de Parfum**
Between 8-15% Perfume oil, this is a common fragrance type and suitable for everyday wear, lasting up to 8 hours.
The Fragrance Family
How to understand where a scent sits

There are numerous categories within the fragrance wheels, as well as different models of the Fragrance Wheel. We choose to follow the Michael Edwards Fragrance Wheel, a consultant in the perfume industry and known as the finest ‘nose’ in the world.

A Fragrance Wheel is meant to assist users in understanding the notes and styles that they desire, although often a favourite scent is a combination of a few notes and sections! The Fragrance Wheel breaks down the perfumes into several main categories, and then similar styles and subcategories within each.

**FLORAL NOTES**
- **Floral:** Fresh cut flowers
- **Soft Floral:** Aldehydes & powdery notes
- **Floral Oriental:** Orange Blossom & sweet spices

**FRESH NOTES**
- **Aromatic:** Aromatic Herbs & Lavender
- **Citrus:** Citrus Oils & Bergamot
- **Water:** Marine & Aquatic Notes
- **Green:** Green notes & Galbanum
- **Fruity:** Fruits & Berries

**ORIENTAL NOTES**
- **Soft Oriental:** Incense & amber
- **Oriental:** Oriental resins
- **Woody Oriental:** Sandalwood & Patchouli

**WOODY NOTES**
- **Wood:** Aromatic woods & Vetiver
- **Mossy Woods:** Oakmoss & Amber
- **Dry Woods:** Dry Woods and Leather

**FOUGÈRE NOTES**
Fougere is French for fern and is a combination of elements from the above groups, containing the largest variety of scents since it made up of combinations of elements from the other groups.
The mark of a good perfume is one that tells its story over time. A perfume is meant to unfold as the hours progress, providing new smells and notes to carry. Perfumes are formulated using 3 notes as the base - Top notes, Middle Notes and Base notes. Each of these represent a different category of scents within the perfume’s unique recipe, and these notes interchange over time.

**Top Notes**
These are the first impressions of a perfume. Strong, intense and bold, they introduce the fragrance. Made of lighter molecules, these generally last between 10 and 30 minutes before evaporation, allowing the middle notes to come to the forefront.

*Examples of Top Note Scents:* Citrus such as Bergamot and lime, Eucalyptus, Sage

**Middle Notes**
Often known as the heart notes, these are noticed as the top notes disappear, roughly 10 minutes to 45 minutes. These are giving scents, lasting up to 6 hours.

*Examples of Middle Note Scents:* Scents: Pine, Lavender, Pepper and Geranium

**Base Notes**
The lingering foundation of every perfume, the base notes of perfume comprise the heaviest and largest molecules that take time to evaporate, even lasting beyond 24 hours.

*Examples of Base Note Scents:* Sandalwood, Patchouli, Clove, Vanilla, Rose

*Important to note that it is the middle and base notes of a fragrance that build the foundation and roundedness of any perfume.*

Create your own Perfume today!

Visit Page 13 to find out how!
The Ingredients

Natural Ingredients of Perfume
Historically, perfumes were dominantly manufactured from natural resources, such as woods, grasses, gums, resins, fruits, spices and flowers. Flowers are especially important as it is very difficult to create a perfume without a floral heart and floral essences, but not all flowers produce the oils needed for scent. The Lily of the Valley, although heady in flowering aroma, is such a plant. It is estimated that roughly 2,000 of the 250,000 known flowering plant species contain the essential oils needed for perfumes. Perfumes can also be made with animal products, such as musk from male deer in Tibet, castor from beavers in Canada, and ambergris from Sperm whales, which has been outlawed since 1977.

It is estimated that only 2,000 of the 250,000 known flowering plant species contain the essential oils needed for perfumes

The process of manufacturing natural sources is exorbitant- a 15-mililiter bottle of French perfume needs the extracted oil from 660 roses, and Sandalwood and Rosewood demands have led to deforestation around the world. Potential crop fails, animal suffering and conservation concerns have all driven perfumers to start using synthetic ingredients.

Synthetic Ingredients of Perfume
Synthetic ingredients are aromatic chemicals that replicate natural sources and ingredients. It is estimated that synthetic compounds contribute to two-thirds of all the most popular fragrances made today. Lab manufactured, synthetic ingredients have the additional benefits of a longer-lasting and denser scent through synthetic fixatives, the ability to blend with essential oils (allowing for countless variations), and the conservation of the planet.

A 15ml bottle of French perfume needs the extracted oil from 660 roses

There are 3 main types of Synthetic ingredients for perfume:
1. Full Synthetics: These synthetics are almost entirely manufactured from petroleum by-products
2. Semi-Synthetics: Natural scents that have been modified by artificial means
3. Natural Isolates: Fragrances that sit between natural and synthetic as they have been developed by isolating one smell from a more complex base
Perfume Ingredient Collection
Whether large-scale or small business, it’s imperative that you have the source of your scents prior to beginning. Plant fields must be harvested, often handpicked by quality of fragrance. Animal by-products are extracted from the fatty substances and glands directly from the animal. Aromatic chemicals, if using synthetic compounds, must be created in the laboratory by perfume chemists, which we recommend.

Perfume Extraction Methods
Below are the 5 main methods of Perfume Extraction, whereby the oils are extracted from plant and natural matter.

Steam Distillation
This process of perfume extraction involves pushing steam through plant material, where the essential oils turns to a gas. This gas is processed through tubes, cooled and liquified. Some oils can be extracted by boiling parts of the plant, such as the petals.

Solvent Extraction
Some manufacturers choose to extract using solvents. Plant parts are dissolved in benzene, which leaves a waxy material which contains the oils. The wax is then exposed to ethyl alcohol. During this method, plant parts are dissolved in benzene and exposed to ethyl alcohol, which is then burned off, leaving a higher concentration of the perfume oil on the bottom.

Enfleurage
In this process of perfume extraction, flowers are placed on glass sheets which are coated in grease. Stacked in wooden tiers, the flowers are removed by hand and changed out until the grease has absorbed the flower fragrance.

Maceration
Like enfleurage, maceration is a process of perfume extraction that uses warmed fats to absorb a flower’s fragrance. Just like solvent extraction, the fats and grease are burnt off in alcohol, leaving the essential oils behind.

Blending Your Perfume Oils
The process of blending is normally done by a master in the perfumer’s field, commonly known as a ‘nose.’ The master perfumer has a specific formula or recipe that often takes thousands of attempts to perfect. It could take as many as hundreds of different ingredients and notes to develop the formula, and years to develop to a fine fragrance.
Once the scent has been created, it is mixed with alcohol. The alcohol base that is used is critical to the overall quality and longevity of the perfume, so an Ethyl alcohol with the least impurities is ideal. We recommend using the purest ethanol available – make sure to check and compare the certificate of analysis for impurities.

The amount of alcohol to perfumer’s oil differs greatly, and fragrances are given different names depending on their concentration. Below is a guide to the naming protocol associated with perfume sprays:

**Eau de Cologne**
- Between 2-5% Perfume oil in alcohol and water
- The oldest term for perfume, this concentration is the most diluted
- Lasts for about 2 hours
- Usually sold in sprays, Eau de Cologne is normally marketed to the youth markets

**Eau de Toilette**
- Between 4-10% Perfume oil in alcohol
- A light spray composition with 4% – 10% pure perfume essence dissolved in alcohol.
- Usually lasts for about 3 hours.

**Eau de Parfum**
- Between 8-15% Perfume oil
- One of the most common fragrance types and is suitable for everyday wear
- Contains 15% – 20% pure perfume essence
- Lasts for about 5 to 8 hours

**Perfume, Parfum or Extrait**
- 15-25% Perfume oil
- Parfum, also known as extrait de parfum or pure perfume, has the highest fragrance concentration.
- Lasts the longest of all, usually 8-24 hours
- Not always suitable for users with dry or sensitive skin
- The most expensive of all scents
- Slightly thicker and oilier

**Perfume Ageing and Maturation**
Once you have gathered, extracted, blended and mixed with alcohol, your perfuming concoction needs to settle and mature. In this stage the perfume is set aside in a dark, cool space where it stays anywhere from 30 days to one year, without any disturbances.

The ageing process allows the alcohol and oils to bind together, resulting in a collected scent. From here, the perfumer will test the smell and make sure the fragrance has the notes that they’re looking for. Adjustments, tweaks, and additional blending can take place here, perfecting the perfume. After any changes, allow the perfume to sit for a few more weeks to mature.
The economic viability of starting your own Perfume Business

Perfuming can be quite complex, especially if reliant on natural sources, such as plant and animal oils. Harvesting of huge fields, handpicking, collecting, extracting, blending and maturation can take a vast amount of time, resulting in the industry only being viable to a few brands.

Modern perfumery has allowed for more new and diverse methods of manufacturing than in previous centuries. Today, anyone can craft a signature scent using synthetic compounds instead of natural oils. Another trend is the market’s desire for less concentrated forms of perfume that are less drying and more for everyday uses. The combined factors of lab created ingredients and lower concentrations of pure perfume have resulted in the decreased costs of scents, encouraging more widespread and frequent use by consumers, and allowing new business opportunities for those interested.

Of the total fragrance industry market share, household and personal care contributed the most to market share. And as developing countries such as India, China and Africa acquire more disposable income, the desire for luxury goods such as fragrances and perfume becomes more necessary.

Starting a profitable perfume business is within anyone’s grasp, and thanks to modern-day innovations, is relatively easy to create. Using the Fragrasol Formula, a tried and tested method, this easy three step process gives new perfumers a stable and simple way of crafting desirable perfumes.

The economic viability of the perfume industry is expected to grow at rapid rates in the coming years. Worth $60.6 billion in 2012, the industry is expected to grow to an estimated global market of $92 billion by 2024.
The Fragrasol Formula
How to make Perfume in 3 Simple Steps

The Fragrasol Formula is an internationally recognised formula for creating perfume. Using Fragrasol Perfume solvents as the alcohol base, this cosmetic grade, 99.9% pure ethanol is the ultimate perfumer’s alcohol. With no impurities, this solvent is manufactured and supplied according to the highest standards and needs of the perfume industry. Combined with the remaining instructions of the Fragrasol Formula, your perfect perfume scent is only a few steps away!

The below guide is based on synthetic ingredients, using the simplest steps to creating perfume.

Step 1 | Gather Your Materials

What you’ll need:
1. Fragrasol Perfume Solvent | Perfumers Alcohol
2. Synthetic Scent Solution | Perfume Oil or Compound
3. Glass Mixing Beaker or Fluoride Plastic bottles
4. Measuring Jug or Beaker

Step 2 | Measure and Mix

1. Now we’re ready to mix our scent and alcohol solvent! Make sure you have measured out the correct quantities of perfume oils to perfumer’s alcohol. Below is a common formula that will guide you to the perfect perfume/alcohol ratio.

<table>
<thead>
<tr>
<th>Desired amount of perfume</th>
<th>Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>500ml Perfume</td>
<td>100ml Perfume Oil to 400ml Fragrasol</td>
</tr>
<tr>
<td>1 litre Perfume</td>
<td>200ml Perfume Oil to 800ml Fragrasol</td>
</tr>
<tr>
<td>2.5 litres Perfume</td>
<td>500ml Perfume Oil to 2 litres Fragrasol</td>
</tr>
</tbody>
</table>

2. Mix your perfume oils with your Fragrasol Perfumer’s Alcohol in a glass beaker or fluoride plastic bottles. Shake vigorously for 30 seconds or more.

Step 3 | Maturation

1. Now that you have the perfume scent and oils mixed, it’s time for the toughest part—waiting. The scented oils and the perfumer’s alcohol need time to bind and mix, so set aside at least 30 days for the process of ageing and maturation to occur.
2. Pack your perfume, still contained in a glass beaker or fluoride bottles, in a dark, cool space where it will not be disturbed at all.
3. After 30 days, or longer if you can wait, re-test your perfume by smelling it. If it needs additional notes or tweaks, now is the time to add any new scents.
4. If your perfume smells like you wanted, simply decant into perfume bottles and getting ready to spray or sell!
Supplier List

We’ve put together a Supplier list of all suppliers who provide quality perfuming products. These suppliers have a range of products, tools and advice so feel free to get in touch and ask a few questions!

1. Perfumer’s Alcohol Supplier  
   Enterprise Ethanol
3. Perfume Synthetic Oils Supplier  
   Scent lab
4. Perfume Bottles and Sprayers  
   Bonpak
5. Fluoride Bottles  
   Scent lab
6. Glass Beakers and Mixers  
   Bonpak

Come visit us at  
www.enterpriseethanol.co.za/fragrasol-south-africa
Fragrasol is Enterprise Ethanol’s in-house range of perfumer’s alcohol. Offering 3 types of Perfumer’s alcohol, consumers can be assured that the alcohol solvent to perfumes is 99.9% pure and tested accordingly.

**Fragrasol 901 | Basic Perfume Solvent**

Our Fragrasol 901 is designed for basic perfumery application. This denatured ethanol product is an over the counter answer to those who do not have a licence to purchase pure ethanol

- Basic Perfume Solvent Formula
- Fully Denatured Spirit
- No Rebate License Required

**Applications**

- Basic perfumery
- Fragrance base
- Room diffusers

Find out more

**Fragrasol 955 | Standard Perfume Solvent**

Our Fragrasol 955 product caters to the commercial sector, offering a unique fully denatured product that still maintains a 99.9% alcohol purity, ensuring quality application

- Standard Perfume Solvent Formula
- Fully Denatured Spirit
- No Rebate License Required

**Applications:**

- Commercial perfumery
- Fragrance base

Find out more
**Fragrasol 1020 | Advanced Perfume Solvent**

Our Fragrasol 1020 product is an advanced formula based on 99.9% pure alcohol. This fully denatured product contains key ingredients that make it an ideal perfume solvent base:

- Advanced Perfume Solvent Formula
- Fully Denatured Spirit
- No Rebate License Required

**Applications:**

- Advanced commercial perfumery
- Fragrance base

Enterprise Ethanol also offers advice around appropriation, licensing and any perfuming questions you may have. We are also open to the public, and consumers are welcome to stop by our retail shop to view the products.

**Website:** [www.enterpriseethanol.co.za](http://www.enterpriseethanol.co.za)
**Address:** 8 Avalon Road, Westlake View, Modderfontein
**Email:** sales@enterpriseethanol.co.za
**Facebook:** [www.facebook.com/EnterpriseEthanol](http://www.facebook.com/EnterpriseEthanol)
Bonpak is South Africa’s leading supplier of glass and plastic containers, with a special focus on perfume bottles. Bonpak’s competitive pricing and flexibility in order quantities, means the smaller bottlers can compete in any market whilst offering first-time entries and home industries a chance to grow their business without having to invest in large quantities of containers. The wide range of sizes and shapes from both local and imported manufacturers starts with a 5ml dropper bottle to a 4.5Lt (one gallon) jar. Closures are available of all the jars and bottles supplied, offering a one stop shop for customers.

Bonpak offer a range of perfuming bottles, containers, lids and corks- below are some of our favourites:

- Perfume Pen Sprayers
- Perfume bottles
- Credit Card Sprayers
- Roll On
- Glass Vials

Helpful, open to the public- and with no minimum orders, Bonpak offers a full retail store with collection capacity, or nationwide delivery.

Website: www.bonpak.co.za
Address: 8 Avalon Road, Westlake View, Modderfontein
Email: sales@bonpak.co.za
Facebook: www.facebook.com/BonpakSA
Scent Lab is the leading supplier of fine fragrance oils. Offering more than just quality perfume oil – they offer advice, formulations and so much more. Defined by Quality, supported by affordability, Scent lab is the preferred perfume supplier.

Offering pre-packaged scents, inspired by the worlds most iconic fine fragrances, you can expect to discover scents such as Armani Si, Coty, and Elizabeth Arden Red Door. Alternatively, chat to the teams to discover how to create your own signature scent!

**Website:** [www.scentlab.co.za](http://www.scentlab.co.za)
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**Email:** info@scentlab.co.za
Resources and References

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- www.bustle.com
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