

If the process is too fast, the final spirit can be adversely affected.

- Hurried fermentation may leave sugars or yeasts in the wash and these will burn during distillation.
- Impurities may remain and leave unwanted smells in the final spirit.

After distillation quality vodkas will be filtered and purified again before dilution to the required strength.

### *Why Filtration?*

More than any other spirit, quality vodka prides itself on its purity and smoothness. Distillation and rectification will be sufficient for spirits, able to mellow out during years of maturation in wood but filtration is required to remove the rough edges from a spirit that rarely enjoys any maturation.

Today charcoal, particularly charcoal made from hardwoods, is the best filter. Charcoal is very absorbent, particularly when activated which means being heated to over 1000F. Some vodkas may benefit from charcoal being tipped into the holding tank to absorb impurities as it descends through the vodka but the best will be pumped through numerous columns, all packed with charcoal, taking a number of days to exit finally through a membrane filter.

### *The Different Styles of Vodka*

Today it's very wrong to think that all vodkas taste the same or that vodka tastes of nothing at all. Most will be neutral in taste to provide the ideal base for mixed drinks but some will deliver flavours and aromas beyond the taste of the alcohol itself. Though not neutral the best of these will still pride themselves on their purity when compared, for example, with gin or tequila.

### *Vodkas with Flavour/Character*

- These will include vodkas rooted in the east, particularly in Poland, a country which lay on the trade route from Asia to Europe. Still today, many are made according to century old recipes using herbs and spices, or local materials such as the

fragrant bison grass or the wild bees honey, used in two ancient regional specialties from Poland. Initially such ingredients were used to mask the unpalatable raw alcohol and to help the 'medicine' go down but, as the aristocracy in both Russia and Poland took greater responsibility for distillation, so flavours and aromas were added to enhance the vodkas. Their tradition is strong and their flavours are the result of lengthy processes such as infusion, maceration or leaching. Today they can be enjoyed for their individuality whether mixed or taken neat. They are not redistilled like gin nor cold compounded as is the case with some of today's cheaper gins and flavoured vodka line extensions.

- These will include Eastern rye and potato vodkas that, thanks to modern distillation techniques, are now pure and clean, unlike their ancestors, but retain some of the character of their raw material because they continue to be distilled to relatively low levels of alcohol.
- These will include Scandinavian vodkas that retain hints of character from the grain; wheat in Sweden and barley in Finland
- These will include an increasing number of western vodkas, keen to be differentiated from neutral vodkas by encouraging the character of single or multiple grain formulae to carry through into the finished spirit.

### *Aged vodka*

This is a tradition noted particularly in Poland, where vodka was laid down in empty wine casks at the birth of a daughter, to be enjoyed on her wedding day.

### *Western style vodka*

Initially all and still most western vodkas are spirits distilled many times usually from grain or molasses to maximum levels of alcohol, before being filtered, the more expensive through tons of charcoal and others more crudely. They are then reduced with pure de-mineralized water and bottled, ready to drink, with no aging, to be judged on their purity and cleanliness alone. They are simply pure alcohol and water. Style not substance, packaging not content are the keys to the success of most.

Vodka arrived in the west thanks to Rudolph Kunett who, prior to the Russian Revolution had been a grain supplier

to the Smirnov family. He met his fellow countryman, Vladimir Smirnov in Paris after both had fled the Bolsheviks and gained agreement to take the recipe for Smirnoff to the States (Vladimir had changed his surname from Smirnov to Smirnoff). There, in 1934, post-Prohibition, he set up the West's first vodka distillery but he was ahead of the time and it was not until John Martin acquired the rights to Smirnoff in 1946 and launched Smirnoff, as a pure, neutral spirit to mix with anything, that the west woke up to vodka. The Moscow Mule was the first of many cocktails to encourage sampling of this tasteless, odourless spirit and in the 50 years since, vodka has grown to become the world's most popular spirit.

The appeal of most Western vodkas remains their lack of aroma beyond the pure smell of ethyl alcohol and a taste that's light and crisp without heavy flavours or oils.

### *Consumption*

In Russia vodka is traditionally drunk chilled or frozen and downed in one. The Russians shoot rather than sip partly because of a belief that the fumes and not the liquid caused drunkenness. In Poland, vodka is usually sipped, with food and at room temperature to allow the tastes and aromas to be enjoyed. In the west vodka has gained its popularity mixed with fruit juices or more recently in cocktails but today, knowing more about what's in the bottle, the regional differences, heritage and traditions are as important with vodka as with other spirits if one is to enjoy the vodka itself and not just take it for the alcoholic kick it adds to a favourite mixer.

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## *The Taste and Flavour School for Spirits*



## VODKA EXPLAINED

The World's most popular spirit



## What is Vodka?

The US government defines vodka as a clear, neutral spirit of no discernable flavour or aroma; a correct definition of many of the vodkas created in the last fifty years but not a fair description of the many that emanate from the east or some of the more recent vodkas created in the west, which remain the purest of spirits and yet retain some of the aroma and flavour of their raw materials.



## Background

Vodka, the world's most popular spirit, remains pretty functional in the east where it's usually drunk neat, a refuge from life's horrors and an aid to the digestion of fatty foods. In the west, where vodka is more a spirit of image and style than substance, few have yet to show much interest in what's in the bottle, excepting perhaps its alcoholic strength but the future looks very different. Westerners are now showing interest in vodkas that taste, whether they be traditional vodkas from the east or vodkas with taste, now distilled in the west.



## History

The Russians and the Poles beg to differ about the origins of vodka and neither has the definitive evidence to support their claims. Russian gave us the name 'voda', meaning water and 'vodka' meaning 'little water' though Poland has similar words 'woda' and 'wodka'. The diminutive 'ka', when used in the middle ages, meant better, a description most likely true of vodka because water, at that time, not only tasted bad but could be very unhealthy too.

What is true is that Poland was distilling vodka for medical use by the 11th century. Grain was being used as a raw material by the 15th century and potatoes, in the 18th century. By the 17th century vodka was Poland's national drink and by the second half of the 18th century Polish vodka was recognized, across Europe and in Russia, to be the best.

In Russia vodka production was first documented in the 9th century, but the first distillery in Russia was not recorded until 1174. These early distillations were for medicine or even gunpowder rather than for drinking. It wasn't until the 14th century that the British Ambassador

to Russia first described vodka as the national drink though, by the end of the 15th century, a monopoly on distillation and sale of spirits had been imposed in Moscow, suggesting that, by then, levels of consumption were already considerable. As late as the 16th century, however, spirits, like vodka, were still consumed primarily for their medical benefits, drunk often in pharmacies that resembled today's cafes, where people gathered for their medicine and a chat.

High alcohol vodkas developed in the cold northern countries because in cold temperatures only high levels of alcohol ensured that the drinks remained liquid. Better still and much to everyone's surprise, the high alcohol removed some of the unpalatable flavours too. But distillation was an imperfect science leaving many impurities in the finished spirit. Vodkas remained far from pure until the Smirnov family achieved spectacular success in Russia when, in the 1870's they were the first to use charcoal in the filtration process and to introduce continuous distillation.

But vodka was soon to make a substantial contribution to world history. In Russia it was often claimed that their authoritarian governments were more afraid of people when they think than when they drink and so turned a blind eye to the widespread drunkenness. So, when vodka distillation was prohibited in Russia in 1914, to assist the war effort it's interesting to note that 3 years later the masses rebelled and overthrew the government. A factor no doubt that encouraged Stalin to rediscover the 'benefits' of cheap vodka during his reign of terror.

Many distillers, including the Smirnov family, fled the Russian Revolution and set up in Europe but none were to gain any success until the second half of the century thanks to Smirnoff. Though unsuccessful in Europe, the recipe for Smirnoff arrived in America in 1934. There the invention of the continuous still, also in the 19th century, had provided distillers with a means to distil exceptionally pure spirit and, though unsuccessful initially, from the 1950s onwards, Smirnoff drove the 'breathless' revolution that transformed vodka from a curious speciality into a fashion icon, to be drunk with elegance and mixed with anything. During the second half of the 20th century, thanks more to marketing than to what was in the bottle, western vodka lost all its associations with the east, becoming a global and stateless, truly international spirit.

It was not until the approach of the 21st century that

westerners began to show any interest in what was in the bottles. Today, alongside neutral western vodkas, numerous traditional vodkas from the east are to be found as well as vodkas, distilled in the west, proud of their own regional exclusivities, distilled in a way to retain some of the taste of their raw materials and selecting waters to enhance the purity of the finished spirit.

The choice can now be made between brands that represent a lifestyle, scarcely caring that they're vodka and those that offer a distinctive product in the bottle and/or heritage.



## The Raw Materials

Vodka can be made from anything containing starch able to be converted into fermentable sugars. The usual choice is grain but potatoes, molasses and fruit can be used also. What local nature provides has usually become the dominant raw material in any region and, though the finished spirit is distilled to high levels of alcohol, the quality and character of the raw materials are still retained in some vodkas.

- Rye is the traditional grain, used almost exclusively in Russia until the late 19th century and remaining the major cereal used in Poland. Rye provides soft, slightly sweet and delicate aromas and a slightly oily taste.
- Outside Poland, wheat is the preference, soft rather than hard and Winter rather than Summer wheat, sown in the Autumn and not harvested until the following late Summer or Autumn. Wheat's starches are readily converted into sugars and wheat tends to lend a more robust sweetness to the finished vodka.
- Where neutrality is the objective and its price is lower, maize may be used instead of wheat, but it tends to produce inferior vodka.
- Six row barley is the choice in Finland as it offers the finest quality of starch and the lowest levels of fatty oils
- Potatoes are not indigenous to Europe. They were imported from the 15th century and were not used for vodka, in a big way, until the 19th century. They are wrongly dismissed as an inferior source of alcohol. Special high starch varieties are used, cultivated in specific micro-climates along the river Vistula and Baltic coast and they remain a more

expensive option than grain. Their preparation is labour-intensive and they produce 30% less spirit than any comparable quantity of grain. They produce vodkas that are now a Polish speciality, heavy in style and full of creamy flavours.

- Molasses have been used extensively in the west, usually when they're cheaper than grain. They produce a clean and pure spirit but often the vodka can taste a little sweet on the palate.
- Water, according to a Polish saying, 'breathes life into vodka'. It's used in the mash and for dilution prior to bottling. Accounting for as much as 62.5% of the finished vodka, differing water sources whether glacial, spring or mineral, can deliver significant variations even between vodkas distilled from the same raw materials. Prior to use, the water must be softened and calcium ions and other hard minerals, removed by deionisation and filtration. Any minerals remaining in the water will be noticeable in the finished vodka either in taste or discolouration. Distilled water is not usual because it tends to produce inferior vodka



## Vodka Production

- A wort, a thick, sweet, hot liquid is prepared to convert the starch into fermentable sugars.
- Yeast is added and fermentation starts, producing a beer like liquid of 6-8% abv. called a 'wash'.
- Distillation converts this 'wash' into a high proof raw spirit. The greater the number of distillations and the higher the level at which the alcohol exits the rectifier, the higher the level of alcohol and the purer the finished spirit that exits as the vapours cool and condense.
- Pot stills are used to produce some vodkas, particularly traditional vodkas but most are produced in the more efficient column still with alcohol drawn off at precisely the desired alcoholic strength.
- Rectification and filtration will remove impurities and so increase the purity though some, particularly eastern vodkas, will rectify to lower levels of alcohol, so as to retain some of the raw material's character. Western vodkas may use many columns, some to take out specific impurities and a final one, to concentrate the spirit at the highest level, around 95%abv