



The image features a vintage label for Grodzisk Beer on the left and a modern glass bottle next to a tall glass of beer on the right. The label is ornate with a green border and contains the following text: "Bottled at the brewery", "Grodzisk Beer", "Almost free from alcohol", "Grodzisk Beer is brewed from the best wheat malt and the finest hops without any further mixture. It will keep indefinitely and is a palatable and thirst-quenching beverage recommended to convalescents, sufferers from stomach complaints and even diabetics.", "Must be kept cool and in a standing position", and "CONTENTS 11 FL. OZS. 333 CL.". The modern bottle is dark brown with a green label that matches the vintage one. The glass is tall and slender, filled with a golden beer topped with a thick head of foam. The background is a light green textured surface.

# Piwo Grodziskie / Grätzer

by Lucas Stolarczyk

**Piwo Grodziskie** means ‘beer from Grodzisk’  
(pronounced Pee-Voh Grow-JEES-K’ya)

- Also known as **Grätzer** in German (pronounced Gret-Sir).
- Beer production in Grodzisk Wielkopolski (Gratz in German) started in the Middle Ages, in the early **14th century** (traditionally, the date 1301 has been adopted).



- For centuries, Grodzisk Wielkopolski was the biggest site of beer production in Poland and was referred to as “**Poland’s beer capital**”; it hosted the top schools where the town’s best brewers shared their knowledge.



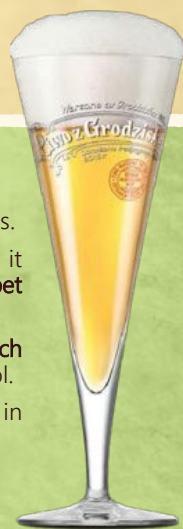
Piwo Grodziskie or Grodzisz.

Grodziskie is among the oldest beers in Europe. Its name comes from the town of Grodzisk Wielkopolski where the beer was born.  
This is the only beer style from Poland.

Beer production in Grodzisk Wielkopolski started in the Middle Ages and goes back over 700 years.

### Good old days

- It was valued as a high quality beer and was used for special occasions.
- Because it's a lively and highly carbonated beer, it's bright and clear, it was called '**Polish Champagne**' and was served in a **conical, trumpet shape glass**.
- Grodziskie was one of the more expensive beers; it **cost twice as much** as the other brews of that time and it was regarded as a status symbol.
- The beer was held in high regard also abroad; no other beer brewed in Poland stood comparison with it.



The beer was difficult and expensive to brew, and as such held in high esteem.

For a long time it was treated as a commodity and even civil servants were rewarded for good work with the beer.

Every respectable nobleman aspired to have Grodzisk beer in his cellar, as it was regarded as a status symbol.

It was not just a commoner's drink.

A host who treated his guests to Grodzisk beer was an extremely generous person.

# Profile



## Grodziskie Beer Profile

- Grodziskie is different from the more familiar German hefeweizen and is unique to Poland.
- Main features are:
  - clear, light golden colour
  - high carbonation
  - low alcohol content
  - moderate levels of hop bitterness
  - and a smoke flavour and aroma.
- The taste is **light and crisp**, with a strong character coming mainly from the smoked malt and the high mineral content of the Grodzisk water.



Grodziskie is rather different from the more familiar German hefeweizen, because it involves a lot of smoke.

More info: <http://barclayperkins.blogspot.co.uk/2007/12/grodziskiegrtzer.html>

## Grodziskie Beer Profile

- Historically made with alcohol levels of around **3.1% abv**.
- Brewing and tasting notes from a 1914 publication described Grodziskie as a "rough, bitter beer ... with an **intense smoke and hop flavor**".



- By the late 20th century, the style's flavour evolved to include less hop flavour and bitterness. Modern recreations of this style tend to focus on the smoky flavour coming from the oak-smoked malt.
- The flavour may also contain a mild **wheat graininess** noticeable in the background.

## Grodziskie

Style Characteristics in numbers (BJCP 2015)

Color Range:	3 – 6 SRM
Original Gravity:	1.028 – 1.032 OG
Final Gravity:	1.006 – 1.012 FG
IBU Range:	20 – 35
ABV Range:	2.5 – 3.3%



**Appearance:**

Pale yellow-gold with great clarity. Pillowy white head should form. Great retention.

**Aroma:**

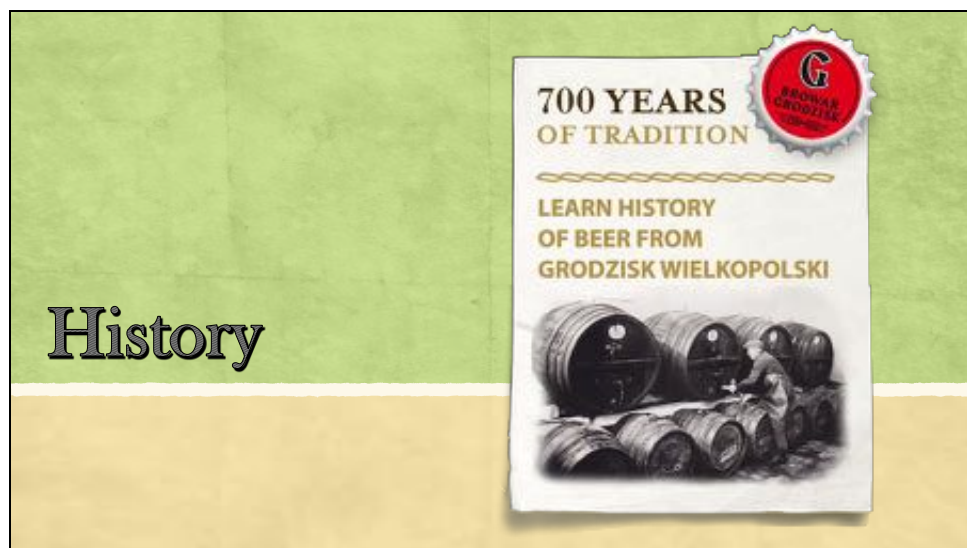
Light to moderate oaky aroma with subtle hoppiness. Fruity esters and wheat are possible. No acidity.

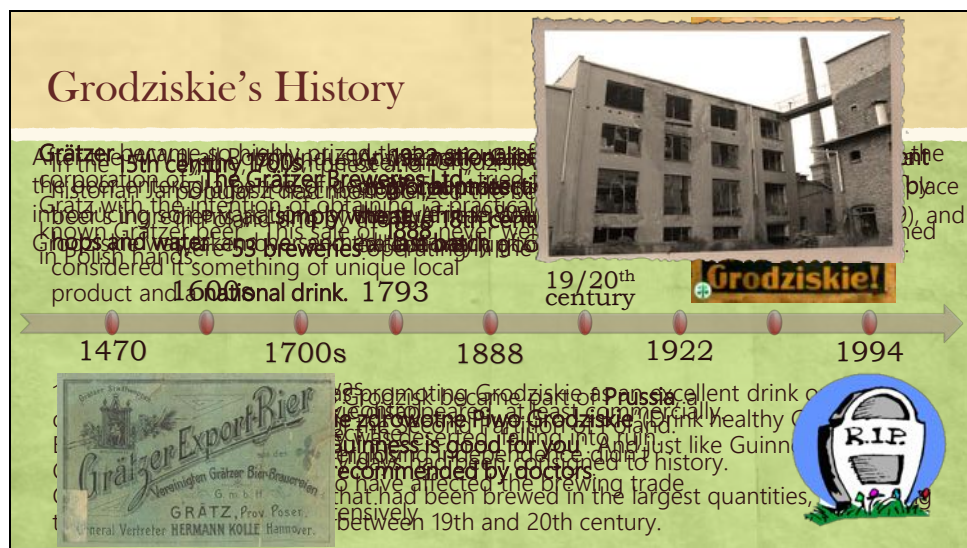
**Flavor:**

Gentle oaky smoke carried through finish. Balanced bitterness with low hop flavors and notes of wheat.

**Mouthfeel:**

Light body. High carbonation with crisp and dry finish.





*The slide is messy so it needs to be run to see all the content.*

In the 15<sup>th</sup> century, Polish priest and historian Jan Długosz described the beer's ingredients as 'simply wheat, hops and water' and he seemed to have considered it something of unique local product and a national drink.

\*Some of this beer's fame came about because of the legend of Bernard of Wabrzezno, a monk at the Benedictine monastery. Around 1600, Bernard found the people dying of disease, thirst, and hunger. The cities wells had run dry, including the largest, just outside the brewery. Monk began to ardently pray to God and soon the well refilled and Brewers could start brewing again.

In 1601 a brewers guild was established and a quality control was put in place to protect the excellence of Grodzisk's highly valued wheat beer.

\*After Brewers Guild was established each time the brewers made a new batch it was required to undergo a tasting by the mayor. The mayor decided if the standard had been met and whether or not the beer could be released to the public. If a brewer tried to bypass or cheat this system and was caught, he would be stripped of his brewing status for life.

By the 1700s, the beer of Grodzisk was so popular it had monopolized the beer scene in Poland and by the late 18<sup>th</sup> century there were 53 breweries operating in the town.

In 1793 Grodzisk became part of Prussia, a result of the Second Partition of Poland. However, losing independence didn't seem to have affected the brewing trade too extensively.

Grätzer became so highly prized that a group of British and German investors under the corporation of "The Grätzer Breweries Ltd" tried to purchase five biggest breweries in Grätz with the intention of obtaining "a practical monopoly for the sale of the well-known Grätzer beer". This sale of 1888 never went through after the biggest of the 5 breweries pulled out and the breweries remained in Polish hands.

19<sup>th</sup> century travel guide was promoting Grodziskie as an excellent drink on a hot day. Other slogan said "Pijcie zdrowotne Piwo Grodziskie" (Drink healthy Grodziskie Beer) Polish equivalent of 'Guinness is good for you'. And just like Guinness, Grodziskie was, for a time, recommended by doctors.

Grodziskie was also a beer that had been brewed in the largest quantities, amounting to even 100,000 hl annually between 19th and 20th century.

At the peak of its fame, Grodziskie was exported to 37 countries (including China, US and even some African countries) and was regarded as an exceptionally good beer.

In 1922, the Cabinet of Poland put Grodziskie under a regional protection. This protection would remain in place through the WW II, the ending of Communism (1989), and all the way up to 1994 when the production stopped.

After the WW II all Polish industry was nationalised, and as a result of under-investment the beer entered a period of decline. There were attempts to re-establish Grodziskie by introducing some variations of the style in 1980s, but the last brewery producing Grodziskie was taken over and the last batch of Grodziskie beer was brewed in 1994.

For 18 years, Grodziskie disappeared, at least commercially. For years, the brewery was deserted, falling into ruin. It seemed like its glory days had been consigned to history. But...



## Homebrewers to the rescue

- **Polish Association of Home Brewers (PSPD)** which was founded in 2010 decided to bring the Grodziskie beer style back.
- In 2011, they began efforts to **revive** Grodziskie. At the same time they started an annual Grodziskie homebrewing competition.



In 1997, Randy Mosher brewed a version for Michael Jackson, which Michael Jackson writes briefly about in the Forward to Randy's book *Radical Brewing*.

## The last Grodzisk brewery re-opens!

- In 2015, Grodzisk brewery re-opened and started brewing the style with the original recipe and one of the original yeasts from 1993.
- Beer has been brought back from the dead for a new generation of craft brewers and beer drinkers to enjoy.
- In the last few years a handful of craft breweries around the world have made Piwo Grodziskie/Grätzer.

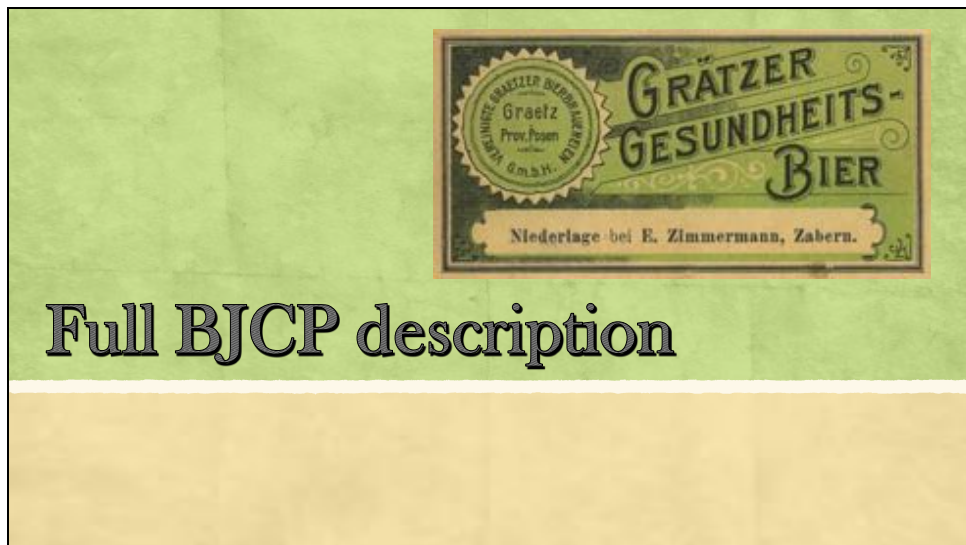


*The slide is messy so it needs to be run to see all the content.*

In 2015, Grodzisk brewery re-opened and started brewing the style with the original recipe and one of the original yeasts from 1993.

Beer has been brought back from the dead for a new generation of craft brewers and beer drinkers to enjoy.

In the last few years a handful of craft breweries around the world have made Piwo Grodziskie/Grätzer.



Full BJCP description

## BJCP 2015

### 27. Historical Beer

- **Overall Impression:** A low-gravity, highly-carbonated, light bodied ale combining an oak-smoked flavour with a clean hop bitterness. Highly sessionable.
- **Aroma:** Low to moderate oak wood smoke is the most prominent aroma component.  
A low spicy, herbal, or floral hop aroma is typically present, shouldn't overpower smoke intensity.  
Hints of grainy wheat are also detected. The aroma is otherwise clean, No acidity.  
Slight water-derived sulphury notes may be present.
- **Appearance:** Pale yellow to medium gold in colour with excellent clarity. A tall, billowy, white, tightly-knit head with excellent retention is distinctive.

The BJCP guideline revisions of 2015 added the style and corrected some of the inaccuracies of the prior guidelines.

## BJCP 2015

### 27. Historical Beer

- **Flavour:** Moderately-low to medium oak smoke flavour up front which carries into the finish. The smoke character is gentle, should not be acrid, and can lend an impression of sweetness.  
A moderate to strong bitterness is readily evident which lingers through the finish. The overall balance is toward bitterness. Low but perceptible spicy, herbal, or floral hop flavour. Low grainy wheat character in the background.  
Light pome fruit esters (red apple or pear) may be present. Dry, crisp finish. **No sourness.**
- **Mouthfeel:** Light in body, with a crisp and dry finish. Carbonation is quite high and can add a slight carbonic bite or prickly sensation.

# Brewing process



## Brewing Process

- Grodziskie was brewed from wheat malt that was **dried** by circulating oak smoke through the grains.
- Breweries typically used locally produced hops and used one or two strains of brewer's yeast.
- The beer wasn't filtered, but Isinglass was used to clarify before **bottle conditioning** to suspended proteins that may cause cloudiness in the final product. The breweries allowed fermentation to finish in the casks or bottles.



## Brewing Process

A 1914 description from 'Bierbrauerei' by Michael Krandauer, gives a pretty good overall idea of the brewing process and what could be expected in a Grätzer of the time.

"...Grätzer Bier, a rough, bitter beer, brewed from **100% wheat malt** with **intense smoke and hop flavour**.

- The green malt undergoes smoking during virtually the whole drying process, it's **highly dried** and has a strong aroma in addition to the smoked flavour.
- An infusion mash is employed.
- Hopping rate: for **50kg of malt, 3 kg hops**. Gravity just 7° [Balling] (1.027SG).
- Fermentation is carried out in tuns at a temperature of **15 to 18°C**. [...] after fermentation the beer is mixed with isinglass and pumped into barrels. After two or three days it is completely clear and ready to be filled into delivery casks or bottles with the addition of 2 to 5% Krausen."

# Ingredients



## Ingredients Overview



- **Water from Grodzisk** – for centuries the unique flavour of the local beer has been attributed to the spring water it is made from. The mineral composition of the Grodzisk water ideally accentuates the bitterness of the beer and contributes to its full flavour.
- **Smoked wheat malt** – it undergoes a special treatment and is slowly smoked with oak wood. This artisan and time-consuming drying method adds a noble and smoky note to the malt.
- **Polish hops** – aromatic hops from the Lublin area make an ideal combination with smoked malt.
- **Grodzisk yeast** – a secret ingredient, for years preserved by the brewers. It is a special strain of top-fermenting yeast used exclusively in Grodzisk beer.
- It's basically a SMaSH beer (Single Malt and Single Hop).

## Ingredients Water Profile




- The water in Grodzisk area is well-known for its brewing quality and is considered one of the ingredients that made the beer famous.
- The last operating Grodzisk brewery made use of its own two wells for supplying technological water. Current brewery is using the same water.

well	hardness total	hardness permanent	alkalinity [as ppm CaCO <sub>3</sub> ]	Ca <sup>2+</sup>	Mg <sup>2+</sup>	Na <sup>+</sup>	Cl <sup>-</sup>	SO <sub>4</sub> <sup>2-</sup> [ppm]	SiO <sub>2</sub> [ppm]	dry m. [mg/l]
#1	450	100	350	122	34	39	81	183	19	684
#2	430	105	325	121	31	32	67	145	21	688

## Ingredients

### Malt characteristics

- The wheat malt for Grodziskie was dried by circulating **oak smoke** (very rarely beech) through the grains.
- The oak smoke and wheat malt lend a subtle, less intense character than what you'd find using barley malt and other woods for smoking.



The American Brewers Review of 1898 describes the malting process:

The wheat malt is steeped for 30 to 40 hours, according to the temperature of the steep water. Germination is carried on with warm sweat, allowing the rootlets to mat so densely, toward the end, that a machine for tearing them apart is required to prevent the malt from reaching the dry-kiln while hanging together. The dry-kilns are made on the principle of coke-kilns, allowing the smoke of the oak wood to pass through the malt and impart an odour of smoke to it.

The main question here is the degree of malt smokiness. Unfortunately there is a lack of data on the content of phenols originating from the smoke in the malt used historically.

Although it had long been brewed solely with wheat, in the 1600s brewers added some barley to the grist and by the middle of the century it had become an all-barley brew, but by the 1690s brewers pulled back on the barley and were making it with one part barley malt to six parts of wheat, and at some point it reverted to all-wheat once more.

**The tartness in Grodziskie...** well, that might be up for debate. Some articles make reference to a sour mash technique, which could come either from an introduction of a culture such as lactobacillus, or by keeping part of the previous batch of wort back and adding it to the new batch. Other articles mention a sourness but that it might have come from the distinct strain of yeast used by Grodziskie brewers or the water mineral content.

The beer have not been exactly the same over the hundreds of years it was brewed, so perhaps, it was once tart but the sourness was worked out of it, or maybe some were tart and some weren't.

General consensus is that Grodziskie should not be sour/tart. Most sources say it was smoky and hoppy. But none that say straight out that it was sour.

"Under the influence of the supposedly excellent well water, to whose qualities until recently the excellent quality of the beer was erroneously attributed, it was possible to brew a beer of far-reaching fame from pure wheat, which has maintained its reputation through the centuries, as a highly sophisticated beverage which because of its smoke and hop bitter taste was not only earlier highly appreciated, but even now is counted among the best top-fermented beers."

"Die Obergärige Biere und ihre Herstellung" by Schönfeld, 1938, page 162.

Smoky and bitter. No mention of sourness and Schönfeld was an expert in sour beers, having studied and written extensively about Berliner Weisse.


More info: <http://barclayperkins.blogspot.co.uk/2013/04/grodziskie-i-wish-they-just-wouldnt.html> and

## Mash Schedule

- **Acid Rest** – Mash in at 36-38C and hold for 30 minutes.
- **Protein Rest** – Step temperature up to 52-55C over 10 minutes and hold for 30-45 minutes.
- **Alpha Saccharification Rest** – Step temperature up to 70C over 20 minutes and hold for 30 minutes.
- **Mash Out** – Step temperature up to 76-78C over 10 minutes and hold for 10 minutes.
  
- Rice/oat hulls should be added to help with the sparge.
- There is no good way to replicate this profile using malt extract.

## Ingredients

### Hops




- Hops that went into Grodziskie were largely local varieties including **Nowotomyski** (an aromatic, low alpha hop developed in the 1830s ) and **Lublin** (Lubelski), but other low alpha noble hops can work well as a substitute (**Saaz**, **Tettnanger** and **Hallertauer**).
- Historically it was a very **highly hopped** beer. But during the 20<sup>th</sup> century decline, amount of hops and bitterness were coming down. From 3 kg of hops per every 50 kg of malt to 2.4kg in 1960s. Final batches had 24 IBUs.
- The average **BU:GU** (Bitterness to Original Gravity) is a whopping **0.9** (just above ESB).
- An aroma addition is usually not a part of this style but hop cones addition to the lauter tun as a filtering aid was reported in the past.
- Historically 80% of the hops were added 15 minutes into the boil (2 hours) and the remainder added at 30 minutes before flame out.

Keep in mind; the low alcohol and high attenuation are going to make the hops more evident.

## Ingredients

### Yeast

- There is a lot of confusion and contradicting information around the strain of the yeast used for Grodziskie.
- The original fermenting yeast was, most probably, not just a single strain. One yeast strain was of a high and **early flocculating** type, the other one was **powdery**. With both working simultaneously, the wort was fermented really fast, losing ca 50% of its extract during 60 hours. Then well flocculating strain switched off and gathered on the surface, and the fermentation slowed down. This was a clear signal for brewer to scoop off yeast from surface, to rack the beer, to add isinglass and to bottle.
- The yeast from the old brewery was preserved on a slant and is now being used in the current Grodzisk Brewery.



Wort was cooled down to temperature 14-16 oC before pitching

Top-fermented.

## Ingredients

### Yeast

- It is not necessarily to use such a complex yeast system as long as you use strains that will ferment cleanly.
- A few possible choices include:
  - Dry Yeast — Fermentis SafAle German Ale Yeast (K-97)
  - Wyeast — German Ale (1007), American Ale (1056), Kölsch (2565)
  - White Labs — German/Kölsch Ale (WLP029), California Ale (WLP001)
- Grodziskie was traditionally bottle-conditioned for 3 to 5 weeks.
- The carbonation for this style is between **3 and 3.6 volumes**,
- This high carbonation requires thick and strong bottles.



## Piwo Grodziskie

### Summary

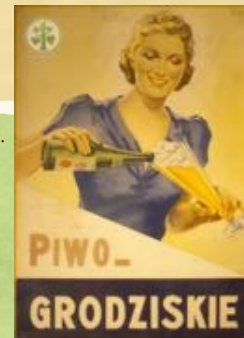
- Grodziskie is a unique style. It is smoky, **refreshing**, and low in alcohol. It's brilliantly quenching for a summer day.
- In order to retain the original style attributes, the following components seem crucial:
  - water of a similar mineral content to the Grodzisk original
  - wheat malt kilned by a oak wood fire (available from Weyermann and Viking)
  - aromatic hops of Polish, Czech or German origin
  - mashing schedule and boiling in accordance with the original procedure
  - clean, top-fermenting yeast (ideally strains used originally)
  - clarification (by isinglass or gelatine)
  - residual fermentation (or refermentation) in the bottle.



## The perfect pour

### Enjoy with pleasure!

- The proper serving and tasting of Piwo Grodziskie is a true ritual.
- Use tall, conical glass, preferably the distinctive Grodzisk stemmed, trumpet shaped glass, to accommodate a vigorous foam.
- Pour the beer slowly into an angled glass to  $\frac{3}{4}$  of its volume and let the characteristic white head grow.
- An ideally served Grodziskie beer should be clear, have bubbles like champagne and be topped with a thick, creamy head.
- Feast your eyes, savour the aroma and start to enjoy!









Examples


## Torrside Brewing

New Mills, Derbyshire



**Sto Lat** ('Hundred years' – good wish, toast in Polish)

Malt		100% Smoked wheat malt
Hops		Lubelski hops More late hops than a traditional example
Yeast		S04 English yeast
ABV		2.8%







## Husk Brewing East London

# HUSK

BREWING LTD





**Grodziskie** (With a bit of a modern twist)



Malt		Smoked wheat malt + plain wheat malt to tone down the smokiness a bit.
Hops		Traditional hops (?) but with a late addition of Jarrylo giving a very faint hint of spiced pear.
Yeast		?
ABV		4.9% - Higher than usual due to the fact that there is "no big market for 2.5% beer these days"






## I did it my way...(well, not really)

### 22L batch

<b>Water</b>		Tap + Gypsum ( $\text{CaSO}_4$ ) + Epsom Salt ( $\text{MgSO}_4$ ) + Table salt ( $\text{NaCl}$ ) + Calcium Chloride ( $\text{CaCl}_2$ ) + Phosphoric Acid
<b>Malt</b>		Oak smoked wheat malt + 4% Acidulated Malt Multi step mash: 38°C – 30min, 55°C – 45min, 62°C – 30min, 72°C – 30min, 78°C – 10min
<b>Hops</b>		Lubelski (4% AA) 55g FW + 15g at 5min 31 IBU
<b>Yeast</b>		Wyeast Kölsch (2565) – fermented at 16C
<b>ABV</b>		3.5% (OG 1.037 – FG 1.010)
<b>Carbonation</b>		3.2 vol $\text{CO}_2$

## Rob's Grodziskie

Malt		100% Oak smoked wheat malt Single step mash: 64°C – 60min
Hops		Saaz – mostly FW+boil, small amount in whirlpool 26 IBU
Yeast		Wyeast German Ale (1007) – fermented like Kölsch
ABV		2.6% (OG 1.027 – FG 1.007)
Carbonation		4.5 vol CO2

Now, your turn...

Brew Grodziskie and become  
one of the keepers of the beer history!



Thank you

Na zdrowie!

