

Smoky idea

- Gravity **7.6 BLG**
- ABV **2.9 %**
- IBU **22**
- SRM **3.4**
- Style **Grodziskie/Graetzer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **28 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **7 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **38 C**, Time **20 min**
- Temp **51 C**, Time **20 min**
- Temp **66 C**, Time **20 min**
- Temp **70 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **24.5 liter(s)** of strike water to **39.3C**
- Add grains
- Keep mash **20 min** at **38C**
- Keep mash **20 min** at **51C**
- Keep mash **20 min** at **66C**
- Keep mash **60 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **7 liter(s)** of **76C** water or to achieve **28 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------------|---------------|-------|-----|
| Grain | Grodziski pszeniczny wędzony dębem | 3.5 kg (100%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Oktawia | 15 g | 60 min | 7.1 % |
| Boil | Oktawia | 15 g | 15 min | 7.1 % |
| Boil | Oktawia | 15 g | 5 min | 7.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------------|------|------|--------|------------|
| Gozdawa hybrid Ale | Ale | Dry | 11 g | Gozdawa |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|--------|-----------|-----|------|--------|
| Fining | whirlfloc | 3 g | Boil | 15 min |
|--------|-----------|-----|------|--------|