

## Gwaŧ Chmielu 2

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- Gravity **18.7 BLG**
- ABV **8.1 %**
- IBU **133**
- SRM **8.5**
- Style **Imperial IPA**

### Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **10 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **85 min**
- Evaporation rate **10 %/h**
- Boil size **28.8 liter(s)**

### Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.8 liter(s) / kg**
- Mash size **20.4 liter(s)**
- Total mash volume **27.7 liter(s)**

### Steps

- Temp **63 C**, Time **60 min**
- Temp **73 C**, Time **10 min**
- Temp **83 C**, Time **10 min**

### Mash step by step

- Heat up **20.4 liter(s)** of strike water to **70.7C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **10 min** at **73C**
- Keep mash **10 min** at **83C**
- Sparge using **15.7 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

### Fermentables

| Type  | Name                       | Amount          | Yield | EBC |
|-------|----------------------------|-----------------|-------|-----|
| Grain | Monachijski                | 2.8 kg (38.5%)  | 80 %  | 16  |
| Grain | Viking Pilsner malt        | 3.78 kg (51.9%) | 82 %  | 4   |
| Grain | Caramel/Crystal Malt - 10L | 0.28 kg (3.8%)  | 75 %  | 20  |
| Grain | Viking Caramel Red         | 0.42 kg (5.8%)  | 75 %  | 60  |

### Hops

| Use for             | Name     | Amount | Time   | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil                | Amarillo | 21 g   | 70 min | 9.5 %      |
| Boil                | Citra    | 21 g   | 70 min | 12 %       |
| Boil                | Columbus | 21 g   | 70 min | 15.5 %     |
| Boil                | Simcoe   | 21 g   | 70 min | 13.2 %     |
| Boil                | Cascade  | 21 g   | 70 min | 6 %        |
| Aroma (end of boil) | Amarillo | 21 g   | 10 min | 9.5 %      |
| Aroma (end of boil) | Citra    | 28 g   | 10 min | 12 %       |
| Aroma (end of boil) | Columbus | 21 g   | 10 min | 15.5 %     |
| Aroma (end of boil) | Simcoe   | 21 g   | 10 min | 13.2 %     |

|                     |         |      |        |     |
|---------------------|---------|------|--------|-----|
| Aroma (end of boil) | Cascade | 21 g | 10 min | 6 % |
|---------------------|---------|------|--------|-----|

### Yeasts

| Name         | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale  | Dry  | 16.1 g | Fermentis  |

### Extras

| Type  | Name                    | Amount | Use for | Time   |
|-------|-------------------------|--------|---------|--------|
| Other | Curacao grapefruit peel | 28 g   | Boil    | 80 min |