

Witaj Świecie! (AKA Hello World!)

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **54**
- SRM **8.1**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **19 liter(s)**
- Trub loss **5 %**
- Size with trub loss **19.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.1 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.33 liter(s) / kg**
- Mash size **17 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **68 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **17 liter(s)** of strike water to **75.2C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **24.1 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|----------------|-------|-----|
| Grain | Viking Pale Ale malt | 4 kg (78.4%) | 80 % | 5 |
| Grain | Strzegom Monachijski typ I | 0.8 kg (15.7%) | 79 % | 16 |
| Grain | Karmelowy Czerwony | 0.2 kg (3.9%) | 75 % | 59 |
| Grain | Strzegom Karmel 300 | 0.1 kg (2%) | 70 % | 299 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------------------|--------|----------|------------|
| Boil | Columbus/Tomahawk/Zeus | 13 g | 60 min | 15.5 % |
| Boil | Columbus/Tomahawk/Zeus | 17 g | 30 min | 15.5 % |
| Boil | Centennial | 3 g | 30 min | 10.5 % |
| Boil | Centennial | 15 g | 10 min | 10.5 % |
| Aroma (end of boil) | Centennial | 15 g | 0 min | 10.5 % |
| Aroma (end of boil) | Citra | 10 g | 0 min | 12 % |
| Dry Hop | Centennial | 17 g | 7 day(s) | 10.5 % |
| Dry Hop | Citra | 20 g | 7 day(s) | 12 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11.5 g | --- |