

Doppler

- Gravity **24.9 BLG**
- ABV **11.6 %**
- IBU **35**
- SRM **23.1**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **120 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **1.87 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **32.9 liter(s)**

Steps

- Temp **63 C**, Time **60 min**
- Temp **72 C**, Time **60 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **74.5C**
- Add grains
- Keep mash **60 min** at **63C**
- Keep mash **60 min** at **72C**
- Sparge using **19.1 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|-----------------|-------|-----|
| Grain | Pale Ale | 2.3 kg (20.1%) | 80 % | 7 |
| Grain | Pilzneński | 6.16 kg (53.7%) | 81 % | 4 |
| Grain | Abbey Castle | 0.3 kg (2.6%) | 80 % | 45 |
| Grain | Pszeniczny | 0.35 kg (3.1%) | 85 % | 4 |
| Grain | słód specjal B 260-320EBC | 0.8 kg (7%) | 80 % | 300 |
| Grain | Melanoiden Malt | 0.06 kg (0.5%) | 80 % | 39 |
| Grain | Płatki pszeniczne | 1.25 kg (10.9%) | 85 % | 3 |
| Grain | Caraaroma | 0.25 kg (2.2%) | 78 % | 400 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|-------|--------|--------|------------|
| Boil | lunga | 50 g | 60 min | 11 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------|-------|-------|--------|------------|
| wlp 007 | Lager | Slant | 300 ml | --- |