

Popiół i diament

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **71**
- SRM **3**
- Style **Other Smoked Beer**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.2 liter(s)**
- Total mash volume **16.3 liter(s)**

Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **12.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **76C**
- Sparge using **19.7 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------------|----------------|-------|-----|
| Grain | Pilzneński | 2 kg (49.1%) | 81 % | 4 |
| Grain | Castle Malting Whisky Nature | 2 kg (49.1%) | 85 % | 4 |
| Grain | Weyermann - Acidulated Malt | 0.07 kg (1.7%) | 80 % | 6 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Sybillia | 38 g | 60 min | 6 % |
| Boil | Target | 31 g | 30 min | 10.5 % |
| Aroma (end of boil) | Azacca | 32 g | 10 min | 14 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 12 g | --- |