

Black Hole (American FES)

- Gravity **16.4 BLG**
- ABV **6.9 %**
- IBU ---
- SRM **39.1**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **25.2 liter(s)**

Steps

- Temp **65 C**, Time **70 min**
- Temp **78 C**, Time **0 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **70 min** at **65C**
- Keep mash **0 min** at **78C**
- Sparge using **16.7 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------------|----------------|-------|------|
| Grain | Słód pilzneński | 3 kg (41.7%) | 80 % | 4 |
| Grain | Maris Otter - Pale Ale Low Colour | 1 kg (13.9%) | 85 % | 6 |
| Grain | Płatki owsiane | 1 kg (13.9%) | 85 % | 3 |
| Grain | Słód Caraaorma | 0.3 kg (4.2%) | 80 % | 350 |
| Grain | Castle Malting - Jęczmień palony | 0.35 kg (4.9%) | 55 % | 985 |
| Grain | Słód Carahell | 0.2 kg (2.8%) | 75 % | 25 |
| Grain | Słód czekoladowy | 0.32 kg (4.4%) | 78 % | 1000 |
| Grain | Słód kawowy | 0.31 kg (4.3%) | 80 % | 250 |
| Grain | Słód żytni | 0.3 kg (4.2%) | 80 % | 7 |
| Grain | Słód Caramel Pils | 0.12 kg (1.7%) | 80 % | 5 |
| Grain | Słód pszeniczny Crystal | 0.3 kg (4.2%) | 80 % | 160 |