

## #18

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **37**
- SRM **29.4**
- Style **Dry Stout**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **2 %**
- Size with trub loss **20.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **23.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **14.7 liter(s)**
- Total mash volume **18.9 liter(s)**

### Steps

- Temp **67 C**, Time **90 min**
- Temp **76 C**, Time **20 min**

### Mash step by step

- Heat up **14.7 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **90 min** at **67C**
- Keep mash **20 min** at **76C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **23.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2.9 kg (69%)	81 %	4
Grain	Monachijski	0.8 kg (19%)	80 %	16
Grain	Barwiący	0.2 kg (4.8%)	55 %	985
Grain	Jęczmień palony	0.3 kg (7.1%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Danstar BRY-97	Ale	Slant	200 ml	danstar