

## # 70

- Gravity **17.1 BLG**
- ABV **7.3 %**
- IBU **33**
- SRM **34.3**
- Style **Foreign Extra Stout**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29.4 liter(s)**
- Total mash volume **37.8 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **75 C**, Time **10 min**

### Mash step by step

- Heat up **29.4 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **10 min** at **75C**
- Sparge using **8 liter(s)** of **76C** water or to achieve **29 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (59.5%)	80 %	5
Grain	Płatki owsiane	1 kg (11.9%)	60 %	3
Grain	Strzegom Czekoladowy ciemny	0.2 kg (2.4%)	68 %	1200
Grain	Strzegom Monachijski typ II	1 kg (11.9%)	79 %	22
Grain	Karmelowy Czerwony	0.5 kg (6%)	75 %	59
Grain	Weyermann Specjal W	0.3 kg (3.6%)	68 %	300
Grain	Jęczmień prazony 900	0.4 kg (4.8%)	55 %	985

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	flex	4 g	180 min	63.7 %
Aroma (end of boil)	Northern Brewer 23	30 g	15 min	8.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
------	------	------	--------	------------

us -05	Ale	Slant	500 ml	WOJTICZ-GESTWA 3 TYG
--------	-----	-------	--------	-------------------------