Kelnarz

- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **25**
- SRM **36.9**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **0 %**
- Size with trub loss **20 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **24.2 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.7 liter(s)**
- Total mash volume **24.1 liter(s)**

Steps

- Temp **68 C**, Time **75 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **18.7 liter(s)** of strike water to **74.9C**
- Add grains
- Keep mash **75 min** at **68C**
- Keep mash **5 min** at **78C**
- Sparge using **10.9 liter(s)** of **76C** water or to achieve **24.2 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.5 kg *(58.8%)*	80 %	5
Grain	Strzegom Monachijski typ II	1.2 kg *(20.2%)*	79 %	22
Grain	Carafa III	0.15 kg *(2.5%)*	70 %	1034
Grain	Strzegom Czekoladowy ciemny	0.25 kg *(4.2%)*	68 %	1200
Grain	Fawcett - Pszeniczny Czekoladowy	0.25 kg *(4.2%)*	73 %	1001
Sugar	Milk Sugar (Lactose)	0.6 kg *(10.1%)*	76.1 %	0

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	10 g	60 min	10 %
Boil	Marynka	20 g	30 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

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