

Test czekolada

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **50**
- SRM **29.3**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.9 liter(s)**
- Total mash volume **24.3 liter(s)**

Steps

- Temp **63 C**, Time **10 min**
- Temp **67 C**, Time **90 min**
- Temp **70 C**, Time **1 min**

Mash step by step

- Heat up **18.9 liter(s)** of strike water to **69.1C**
- Add grains
- Keep mash **10 min** at **63C**
- Keep mash **90 min** at **67C**
- Keep mash **1 min** at **70C**
- Sparge using **11.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Słód Pilsner® 2,5-4,5 EBC Weyermann	4 kg (74.1%)	80 %	4
Grain	Słód CaraWheat Weyermann 100-140 EBC	1 kg (18.5%)	82 %	140
Grain	Słód czekoladowy Bruntal 800-1000 EBC	0.4 kg (7.4%)	--- %	1000

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	50 g	60 min	8.3 %
Szyszka				
Boil	Lublin (Lubelski)	30 g	15 min	3.8 %
Szyszka				

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis