

## Ciemne łagodne (?)

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **28**
- SRM **27.9**
- Style **Schwarzbier**

### Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **30.3 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.6 liter(s)**
- Total mash volume **26.2 liter(s)**

### Steps

- Temp **62 C**, Time **25 min**
- Temp **72 C**, Time **40 min**

### Mash step by step

- Heat up **19.6 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **25 min** at **62C**
- Keep mash **40 min** at **72C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **30.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3 kg (45.8%)	79 %	22
Grain	Pilzneński	2.5 kg (38.2%)	81 %	4
Grain	Strzegom Karmel 300	0.25 kg (3.8%)	70 %	299
Grain	Strzegom Czekoladowy 1200	0.3 kg (4.6%)	68 %	1202
Grain	Jęczmień palony	0.1 kg (1.5%)	55 %	985
Grain	Płatki owsiane	0.4 kg (6.1%)	85 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnat	22 g	60 min	11.2 %
Aroma (end of boil)	Hallertau	20 g	15 min	5 %
Aroma (end of boil)	Hallertau	30 g	2 min	4.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Saflager W 34/70	Lager	Slant	350 ml	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	whirlfloc	1.25 g	Boil	10 min

## Notes

- słód czekoladowy i palony dodany przed samym przełożeniem do filtracji  
*Oct 7, 2020, 6:58 PM*