

## książęce ciemne #5

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- Gravity **16.6 BLG**
- ABV **7 %**
- IBU **19**
- SRM **38.2**
- Style **Schwarzbier**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **31.7 liter(s)**

### Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3.025 liter(s) / kg**
- Mash size **24.5 liter(s)**
- Total mash volume **32.6 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **69 C**, Time **60 min**
- Temp **72 C**, Time **30 min**

### Mash step by step

- Heat up **24.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **60 min** at **69C**
- Keep mash **30 min** at **72C**
- Sparge using **15.3 liter(s)** of **76C** water or to achieve **31.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Monachijski typ II	3 kg (37%)	79 %	22
Grain	Pilzneński	3 kg (37%)	81 %	4
Grain	Strzegom Karmel 300	0.5 kg (6.2%)	70 %	299
Grain	Strzegom Czekoladowy 1200	0.5 kg (6.2%)	68 %	1202
Grain	Jęczmień palony	0.2 kg (2.5%)	55 %	985
Grain	Płatki owsiane	0.4 kg (4.9%)	60 %	3
Grain	Płatki pszeniczne	0.5 kg (6.2%)	60 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Marynka	30 g	5 min	10 %

### Yeasts

Name	Type	Form	Amount	Laboratory
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Saflager W 34/70	Lager	Slant	250 ml	Własne- 2 generacja
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## Notes

- Monachijski, Pilzneński, karmel, płatki - na początku  
czekoladowy - ostatnie 30min  
jęczmień palony - ostatnie 10min

Drożdże albo płynna gęstwa albo suche drożdże GOZDAWA GERMAN LAGER W35 DF 1 saszetka  
*Aug 27, 2022, 9:40 AM*