

# Ciemna Grabinka

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **19**
- SRM **40.7**
- Style **Munich Dunkel**

## Batch size

- Expected quantity of finished beer **47 liter(s)**
- Trub loss **5 %**
- Size with trub loss **49.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **59.4 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **40.5 liter(s)**
- Total mash volume **54 liter(s)**

## Steps

- Temp **55 C**, Time **5 min**
- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **40.5 liter(s)** of strike water to **60.8C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **60 min** at **65C**
- Keep mash **20 min** at **72C**
- Sparge using **32.4 liter(s)** of **76C** water or to achieve **59.4 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (37%)	81 %	4
Grain	Strzegom Monachijski typ I	4 kg (29.6%)	79 %	16
Grain	Żytni	1 kg (7.4%)	85 %	8
Grain	Strzegom Czekoladowy jasny	0.5 kg (3.7%)	68 %	400
Grain	Crystal Red	1 kg (7.4%)	70 %	400
Grain	Special B Castle	1 kg (7.4%)	70 %	350
Grain	Black (Patent) Malt	0.5 kg (3.7%)	55 %	1350
Grain	Czekoladowy	0.5 kg (3.7%)	60 %	800

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	25 g	60 min	8.8 %
Boil	East Kent Goldings	50 g	10 min	6.3 %
Boil	Saaz (Czech Republic)	100 g	5 min	5.1 %
Aroma (end of boil)	East Kent Goldings	50 g	0 min	6.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M84 Bohemian Lager	Lager	Dry	20 g	Mangrove Jack's
Saflager W 34/70	Lager	Dry	11.5 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	11 g	Boil	10 min

## Notes

- Brzeczka 24.02  
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