

# Grom z jasnego nieba

- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **16**
- SRM **12.6**
- Style **Dunkelweizen**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **25.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **16.3 liter(s)**
- Total mash volume **20.9 liter(s)**

## Steps

- Temp **46 C**, Time **15 min**
- Temp **53 C**, Time **15 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.3 liter(s)** of strike water to **49.7C**
- Add grains
- Keep mash **15 min** at **46C**
- Keep mash **15 min** at **53C**
- Keep mash **30 min** at **63C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **13.9 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pszeniczny	2.7 kg (58.1%)	85 %	4
Grain	Strzegom Wiedeński	0.7 kg (15.1%)	79 %	10
Grain	Strzegom Monachijski typ II	0.5 kg (10.8%)	79 %	22
Grain	Pilzneński	0.5 kg (10.8%)	81 %	4
Grain	Caraaroma	0.15 kg (3.2%)	78 %	400
Grain	Czekoladowy	0.05 kg (1.1%)	60 %	1200
Grain	Brown Malt (British Chocolate)	0.05 kg (1.1%)	70 %	128

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Saaz (Czech Republic)	25 g	60 min	4.3 %
Boil	Saaz (Czech Republic)	10 g	40 min	4.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
fruit blanche G1	Wheat	Dry	10 g	gozdawa

## Notes

- blg końcowe 3.0  
260g glukozy, zabutelkowane 2.08.2017  
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