

# Szwarcwajcen

- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **12**
- SRM **20.1**
- Style **Dunkelweizen**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.7 liter(s)**
- Total mash volume **22.7 liter(s)**

## Steps

- Temp **44 C**, Time **30 min**
- Temp **52 C**, Time **10 min**
- Temp **62 C**, Time **30 min**
- Temp **70 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **17.7 liter(s)** of strike water to **47.4C**
- Add grains
- Keep mash **30 min** at **44C**
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **62C**
- Keep mash **30 min** at **70C**
- Keep mash **10 min** at **78C**
- Sparge using **15.2 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1 kg (19.8%)	81 %	4
Grain	Pszeniczny	2.5 kg (49.5%)	85 %	4
Grain	Monachijski	1 kg (19.8%)	80 %	16
Grain	Strzegom Czekoladowy ciemny	0.2 kg (4%)	68 %	1200
Grain	Strzegom Czekoladowy jasny	0.2 kg (4%)	68 %	400
Grain	słód zakwaszający	0.15 kg (3%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	30 g	60 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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FM41 Gwoździe i Banany	Wheat	Liquid	300 ml	Fermentum Mobile
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