

# Dark Pils

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **58**
- SRM **36.1**
- Style **Bohemian Pilsener**

## 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 **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.8 liter(s)**
- Total mash volume **18.4 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **13.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	3.5 kg (76.1%)	80 %	4
Grain	Monachijski	0.5 kg (10.9%)	80 %	16
Grain	Strzegom Czekoladowy ciemny	0.5 kg (10.9%)	68 %	1200
Grain	Black (Patent) Malt	0.1 kg (2.2%)	65 %	1350

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Boil	Marynka	20 g	30 min	10 %
Aroma (end of boil)	Lublin (Lubelski)	30 g	20 min	4 %
Aroma (end of boil)	Pacific Gem	20 g	10 min	15.3 %

## Yeasts

Name	Type	Form	Amount	Laboratory
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CALIFORNIAN LAGER M54 Mangrove Jack's	Lager	Dry	10 g	Mangrove Jack
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### Notes

- Po 20 minutach zacierania w temperaturze 72'C wyspane słody ciemne.  
*Sep 29, 2017, 4:46 PM*