

# Czarny Andrzej z Bronxu

- Gravity **14.5 BLG**
- ABV **6 %**
- IBU **38**
- SRM **36.2**
- Style **American Stout**

## Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.1 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.2 liter(s) / kg**
- Mash size **15.4 liter(s)**
- Total mash volume **20.2 liter(s)**

## Steps

- Temp **68 C**, Time **60 min**
- Temp **68 C**, Time **10 min**
- Temp **90 C**, Time **1 min**

## Mash step by step

- Heat up **15.4 liter(s)** of strike water to **75.5C**
- Add grains
- Keep mash **10 min** at **68C**
- Keep mash **60 min** at **68C**
- Keep mash **1 min** at **90C**
- Sparge using **10.5 liter(s)** of **76C** water or to achieve **21.1 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3 kg (62.5%)	80 %	5
Grain	Viking Munich Malt	0.8 kg (16.7%)	78 %	20
Grain	Słód owsiany Fawcett	0.5 kg (10.4%)	61 %	5
Grain	Jęczmień palony	0.25 kg (5.2%)	55 %	1100
Grain	Weyermann - Carafa III	0.25 kg (5.2%)	70 %	1300

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	15 g	60 min	12.9 %
Boil	Magnum	15 g	20 min	12.9 %
Dry Hop	Equinox	150 g	1 day(s)	14 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11 g	Safale