

# Czarna Dupa Apka

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **44**
- SRM **23.5**

## 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 **19.6 liter(s)**
- Total mash volume **25.2 liter(s)**

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	5 kg (85.5%)	81 %	4
Grain	Carafa II	0.5 kg (8.5%)	70 %	812
Grain	Karmelowy Jasny 30EBC	0.1 kg (1.7%)	75 %	150
Sugar	cukier	0.25 kg (4.3%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Centennial	25 g	60 min	10.5 %
Boil	Cascade	25 g	45 min	6 %
Boil	Willamette	25 g	15 min	5 %
Boil	Cascade	25 g	0 min	6 %
Dry Hop	Cascade	50 g	4 day(s)	6 %

## Yeasts

Name	Type	Form	Amount	Laboratory
us-05	Ale	Dry	11.5 g	---

## Extras

Type	Name	Amount	Use for	Time
Other	cukier	0.25 g	Boil	60 min