

## Ciemne resztki ostateczne

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **35**
- SRM **40.9**
- Style **American Amber Ale**

### Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **19 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.5 liter(s)**
- Total mash volume **20.6 liter(s)**

### Steps

- Temp **50 C**, Time **68 min**
- Temp **20 C**, Time **72 min**
- Temp **10 C**, Time **76 min**

### Mash step by step

- Heat up **15.5 liter(s)** of strike water to **8.3C**
- Add grains
- Keep mash **76 min** at **10C**
- Keep mash **72 min** at **20C**
- Keep mash **68 min** at **50C**
- Sparge using **8.7 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	1 kg (19.4%)	81 %	4
Grain	Wędzony bukiem Weyermann	1 kg (19.4%)	82 %	10
Grain	Grodziski pszeniczny wędzony dębem	1 kg (19.4%)	80 %	3
Grain	Barley, Flaked	0.4 kg (7.8%)	65 %	4
Grain	Strzegom Karmel 150	0.3 kg (5.8%)	75 %	150
Grain	Żytni Barwiący	0.4 kg (7.8%)	55 %	985
Grain	Carafa	0.35 kg (6.8%)	71 %	600
Grain	Żytni	0.45 kg (8.7%)	85 %	8
Grain	Biscuit Malt	0.26 kg (5%)	79 %	45

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	18 g	50 min	15.5 %

### Extras

Type	Name	Amount	Use for	Time
Flavor	Suska	300 g	Boil	15 min