

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 |