

Smola z lasu

- Gravity **16.1 BLG**
- ABV **6.8 %**
- IBU **42**
- SRM **41.7**
- Style **American Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.3 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.7 liter(s)**

Mash information

- Mash efficiency **68 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **21.4 liter(s)**
- Total mash volume **27.5 liter(s)**

Steps

- Temp **69 C**, Time **70 min**
- Temp **72 C**, Time **10 min**
- Temp **76 C**, Time **5 min**

Mash step by step

- Heat up **21.4 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **69C**
- Keep mash **10 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **5.4 liter(s)** of **76C** water or to achieve **20.7 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------------|----------------|-------|------|
| Grain | Suflet Pale Ale malt | 4.5 kg (73.8%) | 80 % | 5 |
| Grain | Płatki owsiane | 0.4 kg (6.6%) | 60 % | 3 |
| Grain | Fawcett - Pale Chocolate | 0.4 kg (6.6%) | 71 % | 600 |
| Grain | Fawcett - Pszeniczny Czekoladowy | 0.4 kg (6.6%) | 73 % | 1001 |
| Grain | Jęczmień palony | 0.1 kg (1.6%) | 55 % | 985 |
| Grain | Weyermann - Carapils | 0.3 kg (4.9%) | 78 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|------------|------------|--------|----------|------------|
| First Wort | lunga | 20 g | 90 min | 11 % |
| Boil | Chinook | 10 g | 10 min | 13 % |
| Whirlpool | Lemon drop | 30 g | 30 min | 4.6 % |
| Boil | Chinook | 20 g | 0 min | 13 % |
| Dry Hop | Lemon drop | 70 g | 3 day(s) | 4.6 % |
| Dry Hop | Chinook | 70 g | 3 day(s) | 13 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|-------|--------|------------|
| Safale US-05 | Ale | Slant | 200 ml | Fermentis |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------|--------|---------|--------|
| Other | gips piwowarski | 5 g | Boil | 70 min |
| Flavor | NaCl | 4 g | Boil | 70 min |