

Leśniak

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **43**
- SRM **28.5**
- Style **Black IPA**

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 **81 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **62 C**, Time **35 min**
- Temp **70 C**, Time **10 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **35 min** at **62C**
- Keep mash **10 min** at **70C**
- Sparge using **9.7 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------------|----------------|-------|-----|
| Grain | Pilzneński | 4 kg (86%) | 81 % | 4 |
| Grain | Weyermann - Chocolate Rye | 0.4 kg (8.6%) | 20 % | 650 |
| Grain | Fawcett - Pale Chocolate | 0.25 kg (5.4%) | 71 % | 500 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|---------------|--------|----------|------------|
| Boil | lunga | 25 g | 60 min | 11 % |
| Aroma (end of boil) | lunga | 25 g | 5 min | 11 % |
| Whirlpool | XJA/436 RPA | 25 g | 0 min | 15 % |
| Dry Hop | XJA/436 RPA | 25 g | 3 day(s) | 15 % |
| Whirlpool | African Queen | 25 g | 0 min | 13.5 % |
| Dry Hop | African Queen | 25 g | 3 day(s) | 13.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| US-05 | Ale | Dry | 11 g | Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|-----------------|--------|-----------|----------|
| Other | jagody | 1500 g | Secondary | 7 day(s) |
| Flavor | jodła koreańska | 100 g | Boil | 5 min |