

SPRUCE ALE

- Gravity **13.3 BLG**
- ABV **5.5 %**
- IBU **25**
- SRM **4.6**
- Style **Specialty Beer**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **18.6 liter(s)**
- Total mash volume **23.9 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

Mash step by step

- Heat up **18.6 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **10 min** at **76C**
- Sparge using **12 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---|---------------|-------|-----|
| Grain | Słód pale ale Viking Malt (Strzegom) | 5 kg (94.3%) | --- % | 5 |
| Grain | Słód karmelowy jasny Carahell® Weyermann® | 0.2 kg (3.8%) | --- % | 25 |
| Grain | Słód zakwaszający Weyermann® | 0.1 kg (1.9%) | --- % | 5 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|---------|--------|--------|------------|
| Boil | Marynka | 30 g | 60 min | 7.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------------|
| US-05 | Ale | Dry | 23 g | Fermentis Safale |

Extras

| Type | Name | Amount | Use for | Time |
|--------|--------------------|--------|---------|--------|
| Flavor | młode pędy świerku | 120 g | Boil | 20 min |
| Fining | Whirlfloc T | 1.25 g | Boil | 5 min |

| | | | | |
|--------|--------------------|------|------|-------|
| Flavor | młode pędy świerku | 40 g | Boil | 0 min |
|--------|--------------------|------|------|-------|

Notes

- pędy świerku 0 min. w siateczce muślinowej namaczone przez 15 minut po wyłączeniu palnika;
schłodzenie brzezki do temp. 15-16°C;
fermentacja burzliwa - temperatura piwa w głównej fazie fermentacji 17-19°C;
przed rozlewem 2-dniowy cold crash w temp. 0-4°C;
rozlew - poziom nasycenia 1,9-2,0 vol.;
refermentacja - 14 dni

profil wody (ppm): Ca 75-125; Mg 10; SO4 100-200; Cl 50-100; Alk. całk. 0-50; RA -100-0
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