

Toporek3

- Gravity **15.7 BLG**
- ABV **6.6 %**
- IBU **55**
- SRM **5.9**
- Style **American 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 **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.6 liter(s)**
- Total mash volume **18.1 liter(s)**

Steps

- Temp **66 C**, Time **60 min**

Mash step by step

- Heat up **13.6 liter(s)** of strike water to **73.6C**
- Add grains
- Keep mash **60 min** at **66C**
- Sparge using **9.9 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|----------------|-------|-----|
| Grain | Strzegom Pale Ale | 2 kg (44.2%) | 79 % | 6 |
| Grain | Strzegom Pilzneński | 2 kg (44.2%) | 80 % | 4 |
| Grain | Strzegom Karmel 30 | 0.32 kg (7.1%) | 75 % | 30 |
| Grain | Strzegom Monachijski typ II | 0.2 kg (4.4%) | 79 % | 22 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------------------|--------|--------|------------|
| Boil | Cascade PL | 10 g | 60 min | 5.2 % |
| Boil | Cascade PL | 10 g | 15 min | 5.2 % |
| Boil | Columbus/Tomahawk/Zeus | 10 g | 10 min | 15.5 % |
| Boil | Mosaic | 10 g | 15 min | 10 % |
| Whirlpool | Cascade | 30 g | 30 min | 6 % |
| Whirlpool | Columbus/Tomahawk/Zeus | 10 g | 30 min | 15.5 % |
| Whirlpool | Mosaic | 30 g | 30 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-----------------|------|--------|--------|------------|
| FM53 Voss kveik | Ale | Liquid | 50 ml | FM |