

ipa1

- Gravity **14.3 BLG**
- ABV ---
- IBU **65**
- SRM **9.9**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.5 liter(s)**

Mash information

- Mash efficiency **82 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **5 min** at **78C**
- Sparge using **16.5 liter(s)** of **76C** water or to achieve **26.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|--------------|-------|-----|
| Grain | Strzegom Pilzneński | 3.5 kg (70%) | 80 % | 4 |
| Grain | Strzegom Karmel 150 | 0.3 kg (6%) | 75 % | 150 |
| Grain | Żytni | 1.2 kg (24%) | 85 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | Marynka | 20 g | 60 min | 9.6 % |
| Aroma (end of boil) | Cascade | 25 g | 10 min | 6 % |
| Boil | Amarillo | 20 g | 40 min | 9.5 % |
| Boil | Centennial | 20 g | 30 min | 10.5 % |
| Aroma (end of boil) | Willamette | 25 g | 5 min | 5 % |