

ipa

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **53**
- SRM **4.6**
- Style **American IPA**

Batch size

- Expected quantity of finished beer **28 liter(s)**
- Trub loss **5 %**
- Size with trub loss **30.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **36.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **21 liter(s)**
- Total mash volume **28 liter(s)**

Steps

- Temp **64 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **21 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **30 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **22.3 liter(s)** of **76C** water or to achieve **36.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|-----------------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (71.4%) | 79 % | 6 |
| Grain | Strzegom Pszeniczny | 1 kg (14.3%) | 82 % | 6 |
| Grain | Caramel/Crystal Malt - 120L | 1 kg (14.3%) | 77 % | 8 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|----------|--------|--------|------------|
| Boil | Nugget | 30 g | 45 min | 8.7 % |
| w trakcie filtracji | | | | |
| Boil | Nugget | 20 g | 30 min | 8.7 % |
| burzliwa | | | | |
| Aroma (end of boil) | Amarillo | 10 g | 10 min | 9.5 % |
| Aroma (end of boil) | Cascade | 10 g | 10 min | 5.8 % |
| Aroma (end of boil) | Citra | 10 g | 10 min | 13.1 % |
| Aroma (end of boil) | Amarillo | 10 g | 5 min | 9.5 % |
| Aroma (end of boil) | Cascade | 10 g | 5 min | 5.8 % |
| Aroma (end of boil) | Citra | 10 g | 5 min | 13.1 % |

| | | | | |
|----------------------|----------|------|----------|--------|
| Aroma (end of boil) | Amarillo | 10 g | 0 min | 9.5 % |
| Aroma (end of boil) | Cascade | 10 g | 0 min | 5.8 % |
| Aroma (end of boil) | Citra | 10 g | 0 min | 13.1 % |
| Whirlpool | Amarillo | 10 g | 80 min | 9.5 % |
| 80 stopni chłodzenia | | | | |
| Whirlpool | Cascade | 10 g | 80 min | 6 % |
| 80 stopni chłodzenia | | | | |
| Whirlpool | Citra | 10 g | 80 min | 12 % |
| 80 stopni chłodzenia | | | | |
| Dry Hop | Amarillo | 50 g | 5 day(s) | 9.5 % |
| Dry Hop | Cascade | 50 g | 5 day(s) | 5.8 % |
| Dry Hop | Citra | 50 g | 5 day(s) | 13.1 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------------|-------|-------|--------|------------|
| Safale S-04 | Wheat | Slant | 250 ml | --- |