

Zimowo-wiosenne

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **16**
- SRM **4.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Steps

- Temp **67 C**, Time **60 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **18 liter(s)** of strike water to **74.8C**
- Add grains
- Keep mash **60 min** at **67C**
- Keep mash **1 min** at **76C**
- Sparge using **15.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------|--------------|-------|-----|
| Grain | Viking Pale Ale malt | 5 kg (83.3%) | 80 % | 5 |
| Grain | Strzegom Pilzniejszy | 1 kg (16.7%) | 80 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|----------|--------|----------|------------|
| Boil | Magnum | 10 g | 60 min | 11.6 % |
| Whirlpool | Amarillo | 15 g | 10 min | 6.3 % |
| Whirlpool | Cascade | 10 g | 10 min | 6.7 % |
| Whirlpool | Citra | 10 g | 10 min | 12 % |
| Dry Hop | Amarillo | 15 g | 4 day(s) | 6.3 % |
| Dry Hop | Citra | 10 g | 4 day(s) | 12 % |
| Dry Hop | Cascade | 10 g | 4 day(s) | 6.7 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|-------|------|------|--------|------------|
| us-05 | Ale | Dry | 12.5 g | --- |

Extras

| Type | Name | Amount | Use for | Time |
|------|------|--------|---------|------|
|------|------|--------|---------|------|

| | | | | |
|-------------|-----------------|-----|------|--------|
| Fining | Mech irlandzki | 5 g | Boil | 15 min |
| Water Agent | Gips piwowarski | 4 g | Mash | 60 min |