

ipkaaaaa

- Gravity **11.2 BLG**
- ABV **4.5 %**
- IBU **46**
- SRM **3.3**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **26.4 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

Steps

- Temp **52 C**, Time **10 min**
- Temp **66 C**, Time **40 min**
- Temp **72 C**, Time **15 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **13.5 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **40 min** at **66C**
- Keep mash **15 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **17.4 liter(s)** of **76C** water or to achieve **26.4 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---------------------|----------------|-------|-----|
| Grain | Strzegom Pilzneński | 3 kg (66.7%) | 80 % | 4 |
| Grain | Pszeniczny | 1 kg (22.2%) | 85 % | 4 |
| Grain | Płatki owsiane | 0.5 kg (11.1%) | 85 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|------------|--------|----------|------------|
| Boil | Marynka | 30 g | 60 min | 10 % |
| Boil | Centennial | 30 g | 10 min | 10.5 % |
| Dry Hop | Centennial | 20 g | 3 day(s) | 10.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|----------------------|------|--------|--------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 15 ml | Fermentum Mobile |

Extras

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

| | | | | |
|-------|-------------------|------|------|--------|
| Spice | skórka pomarańczy | 20 g | Boil | 10 min |
|-------|-------------------|------|------|--------|