

shma

- Gravity **15 BLG**
- ABV ---
- IBU **47**
- SRM **5.9**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **17 liter(s)**
- Trub loss **5 %**
- Size with trub loss **17.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **21.6 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

Steps

- Temp **53 C**, Time **10 min**
- Temp **65 C**, Time **30 min**
- Temp **72 C**, Time **25 min**

Mash step by step

- Heat up **14 liter(s)** of strike water to **58.5C**
- Add grains
- Keep mash **10 min** at **53C**
- Keep mash **30 min** at **65C**
- Keep mash **25 min** at **72C**
- Sparge using **12.3 liter(s)** of **76C** water or to achieve **21.6 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 4.2 kg (90.3%) | 81 % | 4 |
| Grain | Carabelge | 0.3 kg (6.5%) | 80 % | 30 |
| Grain | Pszeniczny | 0.15 kg (3.2%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------|--------|--------|------------|
| Boil | Mosaic | 15 g | 60 min | 10 % |
| Boil | Mosaic | 12 g | 30 min | 10 % |
| Boil | Mosaic | 25 g | 15 min | 10 % |
| Boil | Mosaic | 37 g | 0 min | 10 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
| 05 | Ale | Dry | 11 g | --- |