

obama

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **36**
- SRM **27.3**
- Style **American Brown Ale**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **19 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.5 liter(s)**
- Total mash volume **16.1 liter(s)**

Steps

- Temp **64 C**, Time **15 min**
- Temp **72 C**, Time **45 min**
- Temp **76 C**, Time **1 min**

Mash step by step

- Heat up **12.5 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **15 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **1 min** at **76C**
- Sparge using **10.1 liter(s)** of **76C** water or to achieve **19 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|---|-----------------|-------|------|
| Grain | Pilzneński | 2.75 kg (77%) | 81 % | 4 |
| Grain | Caraaroma | 0.45 kg (12.6%) | 78 % | 400 |
| Grain | cookie | 0.22 kg (6.2%) | 77 % | 50 |
| Grain | weyermann Czekoladowy ciemny pszeniczny | 0.15 kg (4.2%) | 68 % | 1050 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|------------|--------|--------|------------|
| Boil | lunga | 14 g | 60 min | 11 % |
| Aroma (end of boil) | Mosaic | 15 g | 5 min | 13 % |
| Aroma (end of boil) | Cascade PL | 15 g | 5 min | 8 % |
| Whirlpool | Mosaic | 35 g | 1 min | 13.2 % |
| Whirlpool | Cascade PL | 35 g | 1 min | 8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|----------------------|-----|--------|----------|------------------|
| FM52 Amerykański Sen | Ale | Liquid | 112.5 ml | Fermentum Mobile |
|----------------------|-----|--------|----------|------------------|