

APA Lotus, Michigan Copper

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **34**
- SRM **3.6**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **21 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **30 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.8 liter(s) / kg**
- Mash size **22 liter(s)**
- Total mash volume **27.8 liter(s)**

Steps

- Temp **68 C**, Time **60 min**

Mash step by step

- Heat up **22 liter(s)** of strike water to **74.3C**
- Add grains
- Keep mash **60 min** at **68C**
- Sparge using **13.8 liter(s)** of **76C** water or to achieve **30 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------|----------------|-------|-----|
| Grain | Pilzneński | 5 kg (86.2%) | 81 % | 4 |
| Grain | Pszeniczny | 0.8 kg (13.8%) | 85 % | 4 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------------------|-----------------|--------|----------|------------|
| Boil | Lotus | 10 g | 60 min | 15.2 % |
| Aroma (end of boil) | Lotus | 25 g | 10 min | 15.2 % |
| Aroma (end of boil) | Michigan Copper | 25 g | 9 min | 9 % |
| Whirlpool | Lotus | 15 g | 0 min | 15.2 % |
| Whirlpool | Michigan Copper | 15 g | 0 min | 9 % |
| Dry Hop | Lotus | 50 g | 3 day(s) | 15.2 % |
| Dry Hop | Michigan Copper | 10 g | 3 day(s) | 9 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|--------------|------|------|--------|------------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |