Low Fat, High Fiber Cupcake Box - Ron Pollmann with many thanks to Theo Haralampou	
Operation	**Tool / Comments**
Blank: 3" X 3" X 4" (76mm x 76mm x 102mm) - maple or other close-grained hardwood	
Cupcake base	
Mount blank between centers and rough blank round, then make tenon to fit chuck jaws	Roughing gouge/parting tool
Reverse mount blank in chuck and mark bottom of cupcake base at 2" (50 mm) from tailstock end	Pencil
Cut 2.6" (65mm) top diameter of cupcake base and 2" (50mm) bottom diameter of cupcake base	1/8" Parting tool / caliper
Cut 1/8" into blank to left of cupcake bottom to allow room for router tool movement	1/8" Parting tool
Taper cupcake base in straight line from top diameter to bottom diameter, check with straightedge	Roughing gouge / skew/straight edge
Flatten top edge of cupcake base about 1/2" (13 mm) in from edge towards center	Skew
Turn cupcake base with 24 flute cuts	
Replace tool rest with router platform	Router platform
Align tip of router bit with tailstock live center	Router with 90 degree bit
Align front edge of router platform with taper of cupcake base, with router bit extending ~ 1/8" (3mm) into base	
Turn off /unplug lathe and wear hearing protection	*Important safety tip*
Bring up tailstock and lock lathe indexer into first indent	
Move router slowly down length of cupcake base, cutting first flute	*Switch on router away from blank*
Move indexer to second indent and make second router cut	
Readjust router platform depth into blank until a perfect flute is formed by these first two cuts	
Move indexer and make all remaining flute cuts	
Sand flutes, remove dust with brush and clean flutes with denatured alcohol - helps with color saturation	240 grit sandpaper/brush/DNA
Color flutes with Tombow markers	Tombow markers
Hollow cupcake base	
Lid OD: mark top of cupcake base ~1/8" (3mm) from bottom of flutes, this diameter needs to be ~ 52mm	Pencil/ruler or caliper
Mount Jacobs chuck in tailstock with 1.25" (32mm) Forstner bit	Jacobs chuck/1.25" Forstner bit
Drill hole 1.6" (40 mm) deep in cupcake base	
Lid OD: Cut 1/8" (3 mm) deep lip for cupcake lid	Parting tool
Hollow cupcake base to lid ID leaving ~ 1/8" (3mm) for lid recess, use straw/compressed air to clear chips	Scraper / carbide hollowing tool /
Sand inside of cupcake base	240/320 grit sandpaper - 500 rpm
Part off cupcake base	
Double check depth of cupcake base before next step to ensure you don't make a funnel	Depth guage
Cut off cupcake base at about 1 3/4" (45 mm), slightly undercuting bottom	Parting tool

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Cupcake lid	
Flatten face of blank that remains in chuck	Skew or parting tool
Measure cupcake base lip OD, set caliper to slightly larger than this diameter	Caliper
Cut tenon on blank to lip OD diameter, testing fit of cupcake base until base fits tightly into lid tenon	Parting tool / caliper
Slide cupcake base onto tenon and mark outside diameter of flutes on lid blank	Pencil
Cut from outside diameter line to tenon, depth to match lid recess in cupcake base	1/8" parting tool
Test fit cupcake base to ensure flutes fit inside lid	
Cut back tenon to ensure lid fits inside base (lid slightly overhangs flutes), cut small relief on lid tenon	Parting tool
Begin shaping top of lid, leaving 1/16" (1.5mm) to 1/8" (3mm)outside of flutes for lid overhang	3/8" spindle gouge
Reverse chuck top and finish dome of lid	3/8" spindle gouge/skew
Sand lid top, remove dust and clean with denatured alcohol	240 grit sandpaper/DNA - 500 rpm
Use markers to color four concentric rings on top of lid	Tombow markers
Texture four concentric rings in top of lid	500 rpm
- center ring with knurling tool at centerline of lid	knurling tool
- second ring with knurling tool above centerline of lid	knurling tool
- third ring with knurling tool below centerline of lid	knurling tool
- final ring with knurling tool at centerline of lid	knurling tool
Re-color concentric rings to saturate texturing, if desired	Tombow markers
Remove lid and color bottom or leave natural	Tombow markers
Finish cupcake base bottom	
Reverse mount cupcake base and clean up cupcake bottom	Parting tool/skew
Sand bottom of cupcake bottom, remove dust with brush and clean with denatured alcohol	240/320 grit sandpaper, brush, DNA
Color bottom of cupcake base	Tombow markers
Inside of cupcake base: remove dust, clean with denatured alchohol and color or leave natural	Tombow markers